THE

MARYLAND FARMER:

DEVOTED TO
AGRICULTURE, HORTICULTURE,

LIVE STOCK
and RURAL ECONOMY.

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The Proposed National Agricultural Exposition at Louisville, Ky.

We have frequently expressed our ap proval of Fairs and Expositions, having personally witnessed the many benefits they have brought to those who have visited them, or taken part in them. We believe such an exposition, as is proposed to be held in Louisville, will be of very great value to the agricultural interests of our country. We agree, also, with Mr. Wright, the President of the Southern Exposition, that the general government has the necessary power under the Constitution to grant pecuniary aid for this purpose. It may be a "new departure" in granting aid to the agricultural interests; but agriculturists constitute the great bulk of the people, and they have a perfect right to demand this aid, equally with manufacturers or any other class of our citizens. We give the plan our hearty endorsement, and hope the country will see a really National Exposition of agricultural industries successfully inaugurated at Louisville.

But should this be the end? Are not our agricultural industries of sufficient importance to demand more than one such exposition? We would suggest such a National Exposition at least as often as once in four years, and that government give ample aid to insure its success. We propose that the one to succeed this of Louisville, shall be held in Baltimore. We believe the amount of good it would accomplish, on the Atlantic border, is simply inçalculable; and Baltimore offers remarkable facilities to agriculturists from Maine to Georgia for such an exposition. With a reasonable aid from government, our people have the skill and pluck necessary to carry it to a successful issue. Let Baltimore follow Louisville. Then let the Third National Agricultural Exposition be held in the North West, and so pass round.

Let the agricultural press speak in decided tones on the matter of government aid to the workers of the soil. Why should all other industries be aided, and ours neglected? Let us insist upon a hearing, and always demand our full share of government bounties. Let us do this the more earnestly, because every class of our people reap the benefits of improved agriculture.

Farm Work for February.

Now is a good time to do odd chores and to make the barn and out-buildings snug and weather tight Remember, "a stick in time saves nine." A few shingles or a little paint will often effectually stop a leak which is not only uncomfortable, but is always spreading to complete destruction with more than arithmetical progression. A little whitewash often brightens up an ugly spot and gives an air of neatness that is pleasant and encouraging toevery body who sees it. These little things tell on a farm. "A penny saved is a penny gained," or "worth a penny earned," is an old and proper truism, oftener said than practiced, much to the general loss of inde-

pendence and comfort. Old fences are to be repaired and new ones built. These should be built with care and due regard to economy whether they be wire, plank, post and rail, or the old "worm" fence, as they are presumed to be permanent for several years. Look also to the gates, roads and ditches and seet hat they are put in complete order.

Plowing.

Weather and condition of the soil permitting, let all the land be plowed that is required, especially stiff lands and that which is covered by thick vegetable growth or rank turf, for the action of frost and the elements. Land should never be plowed when wet, but at this season may be turned over when more moist than later in the year.

Oats.

If possible, prepare the ground well and sow the out crop, for the earlier this crop is sown the better will be the yield.

Tobacco

Continue your preparation of this crop for market, assort it well and have it well "conditioned" before packing. Sow some seed if the soil be dry enough. If brush be convenient and corn stalks, &c., can be spared, we advise a good burning of the bed, as it dries the earth, enriches it, and destroys weed and grass seeds and has many chemical features to recommend this old plan of growing tobacco plants.

Never let your work drive you. You had better be a little too early than too late, a little fast than too slow—Never be afraid that you will be ahead too far in your work.

Orchards.

Trees may now be planted out if the ground be not frozen or too wet. Make out a list of all fruit and ornamental trees you may want and send it at once to some reliable nurseryman, who will fill it in proper time and you will be benefitted by being among the first to order and giving him leisure to make a good selection before the hurrying time comes on. Remember, "first come is first served," and most frequently is *best* served. If your fruit trees and grape vines have not already been pruned, do that work this month. If it be necessary to lopp off large branches or limbs, the stump left should be neatly trimmed and the place covered with a thick coat of a mixture of clay and fresh cow manure, to be occasionally renewed until the wound is healed. In trimming grapes, cut off the wood which bore last year, and tie up, after shortening the young canes of past season's growth for bearing this year. Some advise close pruning while others insist that it is best to leave an abundance of young wood. A careful judgment should be exercised, and on this point every fruiterer can experiment and thus test for himself these opposite opinions. Our experience inclines us to close pruning and also thinning the grapes at the proper time

Stock of All Kinds.

We refer our readers to what we said in our last number on this subject with the further suggestions that stock for the shambles should now be pushed in taking on fat by as much rich food as they will eat. Use linseed oil cake or cotton-seed oil cake, from 1 to 4 lbs. per day, mixed with other feed. Vary the food often and seldom give the same food one meal after another. Keep them dry and warm and let them have plenty of pure water, not too cold.

Garden Work for February.

Under garden work we include the truck-patch and every thing appertaining to a garden proper. But little can be done this month out of doors beyond what was suggested last month by the "Maryland Farmer." Such beds as require manure should be now spread over heavily and eveniy with strong stable manure, and sown over with plaster and salt, at lhe rate of one of the former to two of the latter, and left if the ground is too wet to plow. If dry enough plow this dressing in deep and leave it in the rough until seed is to be sown, when it should be given some fertilizer and well harrowed, which will put it in nice order for any crop desired.

GRINDING THE COB, TOO.—To shell corn costs, on an average, one and a half or two cents per bushel where the most approved implements are on hand for that purpose. To shell by hand costs three to four cents a bushel. These facts are arguments favoring the grinding of corn in the cob. Most custom mills have corn shellers that do the work after a fashion, but in most cases much remains on the cob; so the miller's hogs fatten on the double toll he receives We have found corn ground with the cob and mixed before grinding with oats or barley makes an excellent feed for nearly all kinds of stock. The fact that the cob increases bulk with slight increase of nutriment, makes the meal better for many uses. Pure corn meal is too concentrated food, and the cob ground with it gives it more bulk and prevents injury to the stock.—*N. Y. Herald.*

For the Maryland Farmer.

Raise Your Own Meat.

What we Southern farmers want in the way of a hog is a breed that will mature in less than a year; and that will grow rapidly and fatten quickly. We want a hog capable of being made to weigh 250 lbs. at from 9 to 10 months old. The most profitable pork, as a rule, is that which is grown in the least time. No domestic animal responds more satisfactorily to good treatment in food, shelter, and in general good care, than the hog.

Keep only so many hogs as can be assured the very best of feed and plenty of it, without waste. A variety of food is necessary to insure health and best general results. Regularity in feeding is very important. Never for once let your hogs become "stunted," but keep them steadily growing. The younger the pig, the faster it can be made to attain growth and fat, and at the least expense. The older a hog becomes, the harder it is to encourage growth and flesh; and the cost of each pound of meat is generally, as a rule, increased with age. The hog intended for slaughter must be *pushed, pushed, pushed,* from the time it is a few days old until the day of slaughter. This is the true secret of profitable pork raising upon our Southern farms. *Push* is a good thing in driving many kinds of business, but it is specially advantageous to those who desire the greatest amount of good home-made pork at the least cost.

Of the three breeds, Berkshire, Poland China, and Essex, each have their special advocates and admirers. Each possess very high individual merit. All three breeds have been sufficiently bred and tested in the South to show that they are all admirably suited to our climate and purposes. I champion the cause of no one breed over the other. All of the above named are good enough. Even their grades are far superior and preferable to any of our native breeds.

Every farmer in the cotton states, should aim to raise his own meat. It can be done at comparatively little cost. Don't keep any more hogs than can be attended to properly.

All the slops from the kitchen should be carefully saved, including all surplus milk from the dairy, and fed to the pigs daily. Nothing like milk (as I know from experience), to fatten a hog rapidly. The lard from milk-fed pigs is beautiful, and of superior quality. Have small grass lots in which the pigs may graze. Clover is splendid for them. Patches of corn or field peas, should also be provided, as well as chufa and artichoke patches.

The corn that is fed to them ought to be soaked in water until it is soft and easily digested. Corn treated in this manner will fatten a hog so rapidly that one who has never tried the plan would be very much astonished at the results. Especially should it be soaked when fed to sows with pigs, and the pigs themselves. I have personal knowledge of the fine results to be obtained by this plan. Before turning your hogs into pasture, don't fail to "snout" them, cut down squarely across the end of the nose until you sever the muscles of the nose and destroy the power of the hog to root.

In time this operation will have to be repeated. This is better than rings and other patents.

A rooting hog is a nuisance and its depredations should never be tolerated. The more the hog roots, the more of his vital strength is exhausted, and the greater amount of food necessary to make a pound of pork. The rooting appendage may do well enough in wild hogs, but is an absolute disadvantage in the improved breeds under present methods of handling. It is then a humane act to deprive them of this power.

Hogs need an abundance of pure water as well as any other stock. The absence of this one thing more than any other, I think is the true cause of disease so prevalent among swine all over the country. They need shade from the hot sun, and shelter from the rains and winds and cold as well as any other stock. The shelter can be built very cheaply, and this small expense would soon pay for itself in the saving of feed.

The greater the exposure to inclement weather, the greater amount of food required to keep up animal heat and to preserve and increase both growth and fat. Hogs should never be permitted to run outside of enclosures and trespass upon our neighbors. When this is the case the shot-gun policy is the best of all others to put an end to the evil. Let every roaming hog be considered in the light of an *outlaw*. We

have hog laws in many sections of the South, but they are not effectual in restraining negroes and mean whites from imposing upon their neighbors, and the free use of "cold lead" to the hogs is the only positive remedy in some sections.

Edwin Montgomery,
Starkville, Miss., Nov. 24th, 1884.

For the Maryland Farmer.

Saving Manure.

It is much easier to tell the farmer that he ought to save manure than to tell him how to save it. A majority of writers content themselves with the first, leaving their work half done. The saving of manure is a matter of so much importance that it should be treated fully, and especially at this season—the season of greatest manure making. But in the limits of a newspaper article it is impossible to do the subject halfway justice.

Though the manure be collected in the compost heap, it is not saved beyond a peradventure. In fact, take the country over and half the manure collected into compost heaps is wasted, between the time of collection and the time the balance is applied. If not roofed over, the rains will carry away the best part of the manure. This loss is not fully represented by the comparative quantity removed, for it is the most readily soluble which is taken, this being proven by the rain washing it out, and manure readily soluble, that is, readily available to plants, is more valuable than that which is not.

It is the common practice to throw the manure from the stables into heaps under the eaves. There it receives not only the rain which would naturally fall upon it, but all that which collected on the roof sloping towards the heap. This frequently trebles and quadruples the waste. After a hard rain many streams of highly colored water flowing from the heap mark the rapid exit of the most valuable constituents of manure.

The remedy for this is to keep a roof over the manure. As its only office will be to ward off the rain, any manner of roof that will do this is sufficient. Boards or clapboards are excellent materials. Even a good roof of straw answers every purpose, but this should not be built over the manure pile when the manure is thrown under the eaves. However, I must strongly protest against placing the compost heap in this situation, as it rapidly rots the side of the stable (if of wood) against which it is placed.

Water is often allowed to carry off manure deposited by hogs and cattle in their feeding lots, because those lots are made on sloping ground. Often they are purposely thus located that heavy rains may wash them clean. The remedy for this is to put such lots on level ground, and possibly to litter them with some good absolvent, removing the litter and manure frequently.

Yet again, water is allowed to waste manure. This occurs when manure is applied to a loose, sandy soil with a subsoil of similar texture and composition. Such soils are never fertile to begin with, and to attempt to make them fertile is but a waste of effort. The fertilizer applied is soon leached out of the soil. I am often led to wonder at the shortsightedness of farmers who apply manure to such soils. Soils of a retentive character, underlaid with a retentive subsoil, will hold the manure applied to them, and no matter how unproductive they may be, it is an economical measure to apply manure to them.

The atmosphere may be allowed to waste manure as rapidly as the rain. Where fermentation is rapid large quantities of ammonia, a very valuable manurial element, are evolved, and will escape into the air. This is always the case when the compost heap is loose and conical. The manure firefangs and loses the greater part of its value. The remedy for this is to keep the heap level or lowest in the middle and tramped solid. This will generally prevent the waste of ammonia.

Yet another way in which manure is wasted is by applying it when half rotted and coarse. Manure is of no value to plants until it is decomposed. If not decomposed when applied to a crop, the season of greatest need will be past before it is available. The value of manure is greatest when the crop is young; wheat, corn, &c., receive the most benefit from fertilizers at the season of the beginning of growth. Coarse, unrotted manure will be of no benefit at this season and the crop will be able to use it only when the season of growth has considerably advanced. Again, when the manure must decompose after being

spread upon the land there is increased danger of waste by wind and weather.

If I have not written of this in the way you expected, I have only to say that I tried to say something new about a much worn subject. JOHN M. STAHL.

Potash for Fruit Trees.

As illustrating the beneficial effects of potash upon the health of peach trees, Mr. J. H. Hale of South Glastonbury, Conn., states that he applied it to an orchard of 8500 trees, at the rate of 800 pounds per acre, and that not more than one or two trees in the whole lot showed any signs of yellows, or any other disease, while of another orchard of 200 trees, to which Potash has not been applied, thirty per cent. are already dead. This statement was made at the winter meeting of the Board of Agriculture. Mr. J. B. Rogers of New Jersey, reported a similar experience with the use of potash in peach orchards. He, however, found that muriate of potash is much better than the sulphate for giving peaches a healthy growth. Prof. Jenkins of the Connecticut Experiment Station, found by the analysis of the wood of healthy and diseased trees, that the latter are deficient in ash constituents. Potash is a cheap fertilizer, and its use in all kinds of orchards should be extended until the ash of the virgin soil is restored.—*N. E. Farmer.*

GRAIN CROPS OF THE UNITED STATES.—Professor Dodge, the statistician of the Bureau of Agriculture, has made the following estimates of the total grain crops and acreage of the United States for the year 1884. The figures are subject to revision, and are unofficially given in advance of the department's statements: Corn, yield 1,800,000,000 bushels, acreage 69,000,000; wheat, yield 500,000,000 bushels, acreage 38,000,000; oats, yield 570,000,000 bushels, acreage 21,000,000; barley, yield 50,000,000, acreage, 2,500,000; rye, yield 25,000,000, acreage 2,500,000. It is not believed that the official figures for corn, wheat and oats will vary materially from these estimates.

The *Maryland Farmer* begins the new year with an issue of 48 pages. If everything in this world was as permanent and prosperous as the *Maryland Farmer*, hard times would be unknown.—*Balto. Daily American.*

Agricultural Experiment Station.

We are happy to quote the following from that staunch friend of the farmer, Gov. Robie of Maine, from his annual message to the Legislature last month: "The development of progressive agriculture is hastenedby experimental work. It cannot be conducted successfully by the voluntary efforts of our farmers, for they do not possess the ordinary means and appliances for experimental investigation. The pecuniary burden which becomes necessary to cover the field and the requirements of agricultural experiments, is too large for any one industry. The best and most economical way to feed and clothe the public, interests every citizen, and is worthy of your careful consideration. The claim of the public, rather than that of the personal farmer, as an economic question, is involved in the result. Experimental work performed at public expense, and made the common property of all, is reasonable and vastly more economical. The State, as well as the farmer, needs an experimental station, which the people asked for two years ago. I hope it may be found practicable to unite it with what is being accomplished on the farm of the State College. We need at Orono a model farm, where may be represented the best breeds of milch and beef cattle, and the best varieties and kinds of sheep and swine. There should be, in a reasonable way, every kind of machinery and farm tools for preparing the soil and doing all that is necessary, in a profitable manner, to bring the largest crops into the harvest home. The relative value of different foods for cattle, and how prepared, are interesting questions.

The final result of experimental agriculture, when generally understood, is valuable and profitable knowledge for every farmer in the State; and also when practiced and utilized on the farm becomes one of the sources of public wealth."

Continuing the Governor speaks of the MAINE STATE COLLEGE OF AGRICULTURE.

"The Institution has received from the State $200,318, and there has been expended on grounds, buildings, apparatus, stock, etc., $150,000. This is a College for the people, and should receive a popular support, and I would urge that the State give the Institution a liberal appropriation. It is gaining in public confidence, represents an important place in our system of popular education, and should be strong and

progressive in all its points. I commend to your careful attention the several reports of the College.

The State of Michigan, like our own State, has takeu a deep interest in the Agricultural College, and has approprlated during the past twenty-eight years for it $609,833, in cash, or $21,780 per annum."

Our Agricultural Products.

The Hon. George B. Loring, Commissioner of Agriculture, in his annual report to the President. The statistical reports published by the department are, he says, based upon the reports of upwards of 10,000 selected observers in different parts of the country, and are much nore accurate than those of former years. With good prices, the current production of the agriculture of the United States can be little short of four billions of dollars, and the values are those of the home markets. The commissioner further says :—

The investigations of the past year show a tendency to further increase the area of corn and cotton and of most of the principal crops of the country. The wheat area is so much beyond the requirements of consumption in this and other countries as to depress the price to a point unprecedented in recent years, favoring at certain points the use of wheat for feeding for pork productions. The present year's history of crop growth in the statisticsl bureau indicates a production above the average. The cotton crop promised to exceed 6,000,000 bales. Corn apparently averages 26 bushels per acre, which is about the average of the prior period of 10 years, giving a crop not heretofore exceeded in absolute quantity. Wheat has made a yield of fully 13 bushels per acre and a product exceeding five hundred millions. The supply of cereals will average fully 50 bushels for each inhabitant. Potatoes of both kinds are fully abundant, and other products generally in large supply.

THE MARYLAND FARMER for January is on our table. This monthly is one of the best agricultural works published in the State and its subscription price is within the reach of every farmer—only $1.00 per annum. E. Whitman, Publisher, Baltimore, Md.—*Somerset Herald.*

The Farmer's Ice House.

Since ice has become so great a luxury, it is important to understand its management.

I see, says a correspondent of the *Breeder's Gazette*, in several of the papers some recommendations about the manner of putting up ice, and some of these do not appear to be "sound." For instance, one paper recommends that when but a small amount of ice is to be stored it is better to construct the house half under ground. I can not see why Ice appears to be preserved better in houses wholly above ground, because it is easier to protect it from the heat of the atmosphere than the warmth of the earth, which, in the summer season, is many degrees above the melting point of ice. I can not see why the rule should not apply as well to small bodies of ice as large ones. However, it is difficult to make a very small body of ice keep well no matter how it is stored. Another paper says it is best to fill the spaces between the cakes carefully with saw dust and to "level up" with the same material between the layers. I tried that way once and found the arrangement admirable for keeping the cakes warm, but not much of a success in keeping them cool; and one morning, about the middle of August, when I found myself without ice, I made up my mind never to do that way again. The best plan is to fill the spaces between the cakes with pounded ice,driven in hard so as to fill every crevice, and, if the weather is cold, a little water poured along to perfectly cement the whole together is a great help. No matter how small the crevice between the cakes,drive in some pulverized ice, and if necessary chop off the edges of the cakes a little to afford room for commencement. When a layer is finished pound up a lot more ice and scatter over the top to form a level bed for the next layer. When packed in this way the whole body of ice in the house becomes, as it were, "massed," and the heat attacking any one point is quickly absorbed and disseminated throughout the whole bulk and neutralized—the refrigerating powers of the whole contents are available at every point. I learned for myself another little "trick" about putting up ice, which it is well to bear in mind, and that is to place the cakes the same side up in the house that they

were in the water. If packed bottom side up they melt much more quickly, and are seldom found "solid" in the middle of the season; but I suppose it to be due to the existence of minute pores through the ice, which would naturally be smaller on the surface exposed to the air, and that, as the ice melts in the house, it cannot drain itself so quickly if bottom side up as when in the natural position. But whatever the reason, the fact remains that ice so placed will not keep.

Discussion on Grasses.

A meeting of farmer's was held at the hall of the New England Agricultural Society, Boston, and the Hon. Chas. L. Flint, Ex-Secretary of the Mass. State Board of Agriculture and high authority on grasses, was called to the chair, and during the discussion Mr Flint said:—

Gentlemen.—We have begun the subject and laid out a broad field for work. There may be some questions gentlemen may like to ask, if not we should be glad to hear from any gentleman who has any thought to suggest on the subject. Mr. Brown has alluded to the importance of raising clover. I fully agree with him in that respect. Clover is a renovating crop every time and for various reasons. One is that it roots deeply and gets a large part of its nourishment from the subsoil, and if the ground is thoroughly filled with clover roots when the clover dies, it is a great addition to the fertility and the soil is in better condition for other crops. A crop of clover will increase the nitrogenous elements in any soil whether it is cut and cured in the form of hay or whether it is fed off; in any case it increases the nitrogen in the soil. This is a thing that has been thoroughly established by the careful experiments of Professor Voelker, recently deceased, a gentleman of great intelligence and scientific information who has given much light on the influence of clover on our soils.

Quite a lengthy discussion followed on the subject of orchard grass.

Mr. JOHNSON—Will the orchard grass hold on as long as the other grasses?

Mr. GRINNELL—Yes. It has come to stay and on that account it will not do to sow it with any other grass,—it ripens so much earlier. If you let it stand long enough to cut with herdsgrass, it is hardly more valuable than straw, it is so woody. But if it is cut early it is a succulent, nutritious grass. That is its advantage. You can have a regular series of grasses and begin cutting with the early and so on as they ripen.

Mr. WARE—What kind of soil does orchard grass want?

Mr. GRINNEL—Orchard grass wants a good soil. You should sow on good strong land. It is a very strong growing grass. Anything that produces three crops on an average in a year must have something to furnish the nutriment.

QUESTION—What time do you sow the seed?

Mr. GRINNELL—You can sow in the fall or spring. I do it both ways. When I sow in the spring I seed with oats for the purpose of cutting the oats for my green crop soiling. I begin soiling as everybody does, with winter rye, but it is almost worthless. It is about as poor as anything for nourishing succulent feed, and it will not last over ten days to a fortnight.

Mr. WETHERELL.—As to orchard grass, is it not likely to grow bunchy?

Mr. GRINNELL.—Yes, and there are two or three ways to correct it. One is to sow the grass very thickly at first. Or you can sow clover seed in all places between the bunches. Still another way is to drag a harrow over it and it will close up the vacancies a good deal. I don't think there is much danger of its growing bunchy if it is sowed thickly.

Mr. MARSH.—Is there not danger of growing it too thickly?

Mr. GRINNELL.—No, I don't think there is.

Mr. MARSH.—Is there not danger of getting herdsgrass too thick?

Mr. GRINNELL.—I don't think there is, do you?

Mr. MARSH.—Is there not danger from blight?

Mr. GRINNELL.—I have seen it look a little mouldy and slimy at the bottom, but if it is cut early there is not much danger from that. I don't anticipate trouble from sowing seed of any kind too thickly.

Mr. WARE.—Do you know its feeding value compared with timothy?

Mr. GRINNELL.—By analysis, I don't.

By practice, I do. We have nothing in the grass line that makes more milk than orchard grass.

Mr, WARE.—That is according to your practice?

Mr. GRINNELL.—Yes. We find it as profitable for milk as any other grass we cut. The first crop is almost equal to rowen. It is green and soft and much like rowen. The first crop is remarkable for the fineness of the grass. There is no organic difference, I am told, between it and rowen.

Mr. MARSH.—Which requires the higher care, herdsgrass or orchard grass?

Mr, GRINNELL.—I think orchard grass will take care of itself better. It is stronger than herdsgrass. I think it sends its roots down deeper. The root of the herdsgrass is nearer the top of the ground. Orchard grass will sustain itself better,

Mr. WARE.—Let me say one word with regard to the cutting of grasses. I have seen a whole field killed outright by mowing very close and feeding the land. There are two or three I remember. I once had a field mowed by a machine and a mowing machine agent came along and said: "I have got a machine that will cut a deal closer than that." 'Said I, "if you have, I don't want it." When mowing machines were first introduced, they made a great point of cutting close, but it is very injurious to cut close. As I said, I have known of several fields killed by cutting too closely.

Mr. GRINNELL.—Don't you cut closer with a machine than with a scythe?

Mr. WARE.—Yes. And the cutting is uniformly close. With the scythe there is the heeling down and the pointing out which leaves the grass a little higher than at the middle of the swath. With regard to orchard grass I have cultivated it for years. It is a very valuable grass. I used three bushels of seed to the acre. That would seem to be a very large amount, but the seed is very coarse. Probably if you would count the number you would find find that it was not more than that in a peck and a half of herdsgrass. Certainly not more than in a bushel of redtop. If it is sown thickly it will not bunch.

[Want of space obliges us to omit much of this interesting discussion. It is a topic of great importance to all our readers, and we may resume it at a future time.—EDS.]

Value and use of Cotton Seed.

Figures have been given by which an attempt is made to show the exceedingly large value of the cotton seed. The production of seed is no doubt enormous. With a crop of 6,000,000 bales of cotton the quantity of seed produced is 3,000,000 tons, or 100,000,000 bushels. Heretofore nearly the whole of this crop has been returned to the soil as manure for the succeeding crop, as the seed is the only part of the crop which exhausts the soil, the lint being pure carbon, all of which is derived from the atmosphere; this return of the seed to the soil practically supplies every demand of the crop. But the seed contains about 40 per cent. of a valuable oil, of equally good quality as the best olive oil, and all of which, like the lint, derives its elements—carbon and hydrogen—from the atmosphere. So that the valuable oil may be extracted and the refuse cake, which contains all fertilizing matter which has been taken from the soil, may be alone returned as manure, with as much useful effect as the whole seed could have been. But the refuse cake has valuable feeding properties, and makes the richest food for fattening cattle known. When fed to mature animals, to prepare them as fat beeves for the market, nothing is taken from the cake but a certain amount of oil that is still left in it, amounting to about 13 per cent. of its weight. This produces fat, and the residue of the cake is ejected from the animal as undigested matter, or as waste nitrogen in the urine. So that the seed may yield 25 per cent. of its weight of oil and 13 per cent. of its weight of beef fat, and yet its return to the soil as manure gives back all its fertilizing elements. Certainly there is no other product that can be turned to a more completely useful account, or from which so much value can be gained from so little substance and at so small a cost or with so much profit. No wonder, then, that the Southern people are anxious to get all they can from this valuable product—the cotton seed—and are contemplating ways and means for using it in feeding cattle. But right here enters one of those disagreeable difficulties which so often blocks the way of a promising enterprise. Cotton-seed oil is in limited demand, and only a small portion of the seed can be used in this manufacture. And the cake being exceedingly

8. Where the chickens are kept up all the year, and everything is bought for them, from 100 to 175 per cent. is the profit.

9. This is the case where nothing is sold at fancy prices; but taking the ordinary market demand for chickens and eggs.

10. Where the refuse grain—corn, oats, wheat screenings, buckwheat, barley—of a farm, with vegetables in due proportion, and refuse scraps of meat, and much that would be wasted, are utilized with chickens, the profits are enormous. The poultry manure alone would pay every cent that could be realized by the sale of the above refuse grain, vegetables, &c., &c.

11. Not half the number are kept on farms, that could be kept with this ratio of profit.

12. The demand for chickens and eggs is steady—great numbers should be raised during every summer and sold during the autumn and winter.

13. If special care is given to have them early and sold as spring broilers, the profit becomes extra large.

14. Thus far we have given the experience with the common stock.

15. If the subject is properly studied, the best stock for the farm secured, the best care taken of the stock, the profits frequently rise to 1,000 per cent. and upward.

16. In this case fancy prices for birds and eggs are received; and there is always plenty of demand for the very best birds and their produce.

17. It is estimated that between 3,000 and 4,000 breeders are doing busines on the above principle in this country. But, very few of them on farms.

18 The same care can be given on farms and the same profits secured.

19. But for the vast majority who will give the chickens but little care, we place the lower rate of profit. They may expect at least 100 per cent. profit on their outlay.

20. They can hardly make mistakes enough to sink the profit below this percentage.

21. The profits on small flocks—say from 6 to 20 chickens—have always been a much larger percentage than where 100 or 200, or more, have been kept.

22. This would seem to indicate that better care has been bestowed upon the small flock; otherwise, the profits should be equal in both cases.

23. Remember, for profit, large numbers must not be kept under one roof, nor, in one flock.

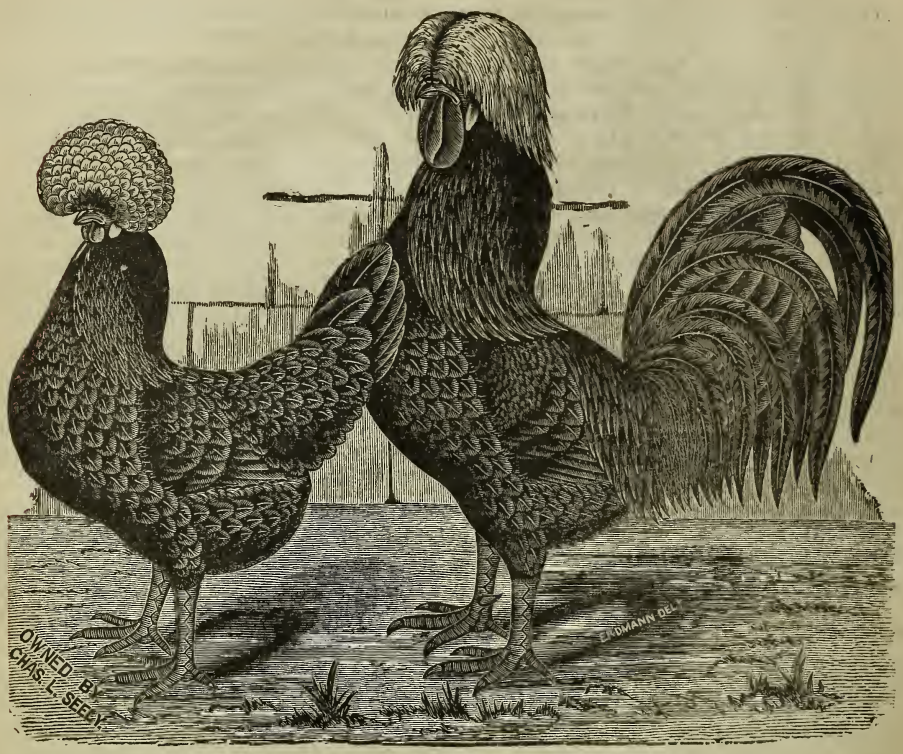
24. Also, remember, they must be kept in a methodical manner; the small flocks in their own houses and yards, and at stated times given wide range. This secures the largest profits.

25. The conclusion of the whole matter is this: The profit on this busines is good. It is a profit which can be depended upon, year after year, increasing with the length of experience. In no other business can an equal percentage be realized upon invested capital.

Col. F. Carroll Goldsborough left his home near Easton last month, for an extended tour through the Southern States and Mexico, and expects to be absent several months. The Colonel is an extensive raiser of Oxfordshire sheep, and a contributor to the columns of our Journal. We wish him a pleasant trip.

Real Estate Sales.

The farm of Thomas Bevans, near Hancock, Washington Co., Md., containing 426 acres was sold to Virginia C. Ryan, for $4,800.72; the farm of John Hager, deceased, near Hagerstown, containing 154½ acres, to D. S. Kenly, of Baltimore, for $93.50 per acre; and the farm belonging to the heirs of Henry Ruch, in the Beaver Creek district, containing 160 acres, to Isaac Beard, at $81.15 per acre; Mr. E. Stanly Toadvin, of Salisbury, Md., sold one of his farms near that place, containing about 160 acres, for $5,000 cash, to Moal Bros., of Pennsylvania.

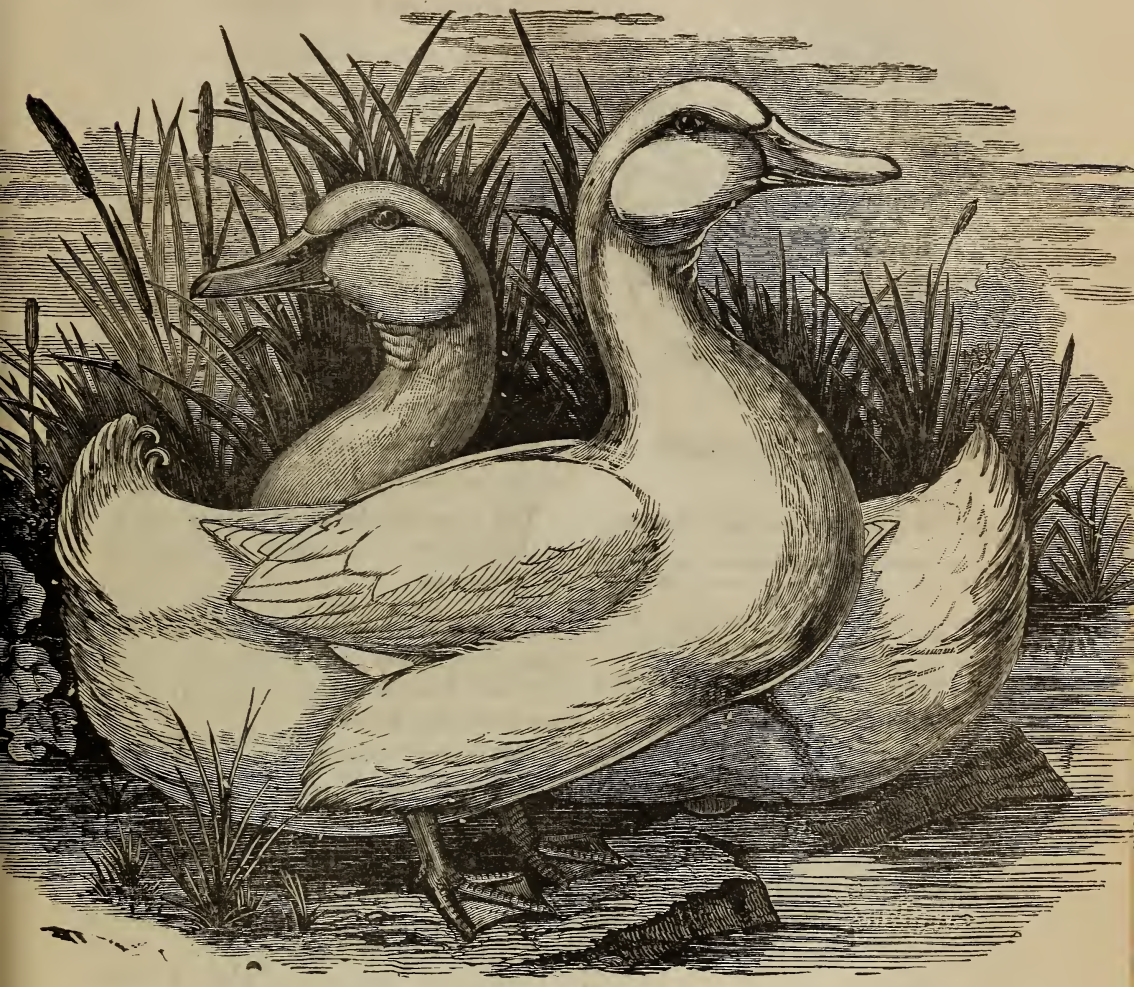


White Crested Black Polish.

We are indebted to Mr. Seely, of Afton, N. Y. for the excellent picture of W. C. Black Polish, one of our handsomest breeds. Of course each breeder has his favorites, and the good points of his pets are sure to be heralded. We think every poultry fancier will agree with us in the statement that the White-crested Black Polish are one of the handsomest, if not *the* handsomest, of our domestic birds.

Whenever shown they are sure to find many admirers. The body, wings and tail are jet black. The crest is white, with a narrow black band in front. The cocks are extremely proud, and as they strut about one cannot fail to admire, and many will find themselves saying "the prettiest I ever saw!" The Standard permits a small V-comb and says "the smaller the better." Chenango Prince has no comb and most of his chicks are like him in this respect, and what do have combs have only small ones. Mr. Seely breeds remarkably close to the Standard. He also breeds the pure White Polish, Dark Brahmas, and Black Hamburgs, and finds that his Polish will compare favorably with the others as layers.

The White-crested Black Polish have black or dark horn-colored beaks, and black legs, or a dark slate approaching black. There is a protuberance on the skull, which is concealed by the crest, the feathers of the crest of the cock being similar in shape and texture to those of the hackle. The base-feathers in front of the white crests of cock and hen are black, the fewer the better. The comb should resemble the letter V in shape, and the smaller the better. The wattles are red and the earlobes white, the hackle glossy black, and the plumage a rich glossy black throughout.



PEKIN DUCKS, as bred by Col. J. Leffel, Springfield, Ohio.

Pekin Ducks.

They were first imported into this country in 1873, since which time they have become very popular. Their color is a pure snowy white which makes them very handsome and attractive for small bodies of water or the lawn. They can be raised anywhere that chickens can and do not require much water until they are several months old, and even then they will thrive and do well with but a small trough of water, if they have a good grass range? It is a very beautiful sight to see them deploy in long line through the grass in search of crickets and other animal matter. They mature very early and can be marketed in July and August at high prices. It takes in warm weather about four weeks to hatch them out and when developed will weigh about fifteen pounds to the pair. They will lay about one hundred and fifty eggs per year. During the summer months they require but very little food, as when they have a good range they will pick up enough to keep them in good condition, especially if they have access to the chicken yard as they will eat what the chickens waste. It is now a good time to get breeding stock for next season,

A STANDARD MAGAZINE,

DEVOTED TO

Agriculture Live Stock and Rural Economy.

Oldest Agricultural Journal in Maryland, and for ten years the only one.

EZRA WHITMAN, Editor and Proprietor.
COL. W. W. W. BOWIE, Associate Editor.

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BALTIMORE, MD.

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Premiums to Subscribers.

Any one of the following articles will be given free to subscribers who pay $1.00 in advance for the MARYLAND FARMER.

Six (6) papers garden seeds of best variety
1 p'k'g Palmers plant and vine protector.
1 " Stonebrakers liniment for man or beast.
1 " " Horse and cattle powders
1 " " Chicken powders.
1 copy of Kendall's Treatise on the Horse.
1 copy of Scribners Lumber and Log Book
1 copy of Scribners Grain Tables.
1 copy of *Poultry Post* one year post paid.

The above articles need no description of their merits; they range in price from 25 to 50 cents.

Any one sending $1.50 in advance will receive the MARYLAND FARMER one year and one of the following named valuable books he may select.

The World's Cyclopedia, containing 50,000 references, 1200 illustrations, 800 pages; price $1.00.

Everybody's Paint Book; price $1.00.

Pallisers Model Homes; price $1.00.

Garden and Farm Topics by Peter Henderson, price $1.50, will be given with the MARYLAND FARMER for $2.00.

One new Meat Chopper, No. 10, family size, price $3.00, with the MARYLAND FARMER one year for $3.25.

One Howe Sewing Machine, new, warranted first class, price $50.00, will be given for 20 new subscribers to MARYLAND FARMER.

One Young America Corn and Cob Mill, warranted first-class in every respect, price $40.00, will be given for 25 new subscribers to the MARYLAND FARMER one year.

Diversified Labor and Mixed Husbandry.

The country is to be congratulated upon the unmistakable signs that general trade and business is brightening—that the gloom which has for six months or more hung over all industries is lifting and the clouds dispersing, so we may hopefully expect the first quarter of the present year will fully dissipate the doubts and temporary distresses of our people in which darkening uncertainty the year 1884 left us. There seems now to be every assurance that 1885 will more than compensate for the depression of 1884, as '79 surpassed '78, which, in much, greatly resembled the past year. Many causes could be assigned for the stagnation of business but it suits our purpose only to mention the chief one—*over-production*, which has locked up the vast capital of monied men, because there is no field in which safe investments can be made to assure high interest on the money employed, hence while the coffers are full to overflowing, thousands are suffering for want of employment—such is the mutual dependence between all avocations, that one can rarely be affected without another, but general depression seems to fall more heavily upon agriculture than on any other employment. And yet it is said that a flourishing agriculture is the life of a nation. So it is, if that agriculture be best adapted to the wants of the people and to the farmer particularly.

Leaving for the present other employments to devise ways and means to correct their faults and bring about a healthy condition after a season of plenty and plethora, we ask leave to suggest to the tillers of the soil, one way in which they can re-instate themselves and again be the recipients of a fair reward for their labor and industry.

Diversify your crops and seek various means consonant with farming to give employment to all on the farm, by a variety of occupations. No longer cling to old habits of devoting all your energies to one or two special crops—*no longer risk all your eggs in one basket*—no longer depend solely on wheat, corn, tobacco or cotton, but diversify your husbandry by grazing and fattening stock, or raising improved breeds of cattle, horses, sheep and hogs, and poultry. Have as many bees as you can attend to conveniently. Grow fruits and vegetables, and evaporate, dry, can, or pickle all you cannot sell fresh at a reasonable price. These seem to be trifles to many who look with contempt upon *small* industries, but they are not so. The sea shore is made of grains of sand, "tall oaks from little acorns grow," and fortunes have been made from these "small industries" as they are called —Raising stock is beyond question a lucrative business and will ever enrich the soil. The selling of milk, where one is near a market, is profitable, and the same can be said of butter and cheese, if it be properly made, which can very easily be done. Of the value of poultry no question can be raised when we all know what a dozen eggs cost, and such is the demand for them and poultry, that Europe furnishes the United States with millions of the former and tons of the latter. No one can doubt the value and profit of fruit and vegetables. Bees also bring stores of comfort and sums of money without expense for their food. One lady is reported to have devoted only a portion of her time to them and sold honey enough to net $300 in one season. This is more, than 700 bushels of wheat last year netted the farmer, after he paid for rent of land, seed, manure, cultivation, harvesting, getting it ready for market, freight, commissions, &c. We could go on *ad infinitum* to show what these small industries can do on a farm, and they can be profitably conducted by children and old people, whose labors on the farm are useless.

In saying this we do not wish to be understood as advising the farmer to cease

growing any one or all of the large specialties. Far from it. We say, grow all the wheat, corn, tobacco or cotton you can grow with profit, but add some one, or all these small industries, according to your location and surrounding circumstances. Rather let your endeavor be to improve your soil, so that one acre, with good cultivation, will grow, as much as three do now, thus saving both time and labor, and having the other two acres left for grass or hay—don't give up your specialties. It has been heretofore the great fault of our go-ahead farmers to abandon a crop as soon as it does not pay—wheat, for instance, this year did not pay to grow, nor corn, but it is no reason why it should be abandoned. Next year it may bring a high price owing to failure and a reduced area. Such was the case with potatoes only two years ago. As soon as they reached a high price, and Ireland sent over thousands of bushels, every farmer laid out a big patch and hence they now are a drug on the market. But the cereals and potatoes, whether large or small crops be made, are never below remuneration if the farmer has stock to feed. If he has not, it is to him unprofitable. If he has good stock he can profitably raise corn at 40 cents a bushel and wheat at 80 cents, as long as meat is high—7 cents for beef and 8 or 9 cents for hogs per pound, live weight, and meat is likely to long continue high, for people must have it, the markets of the world must be supplied, and no country is looked to for such supply except ours, while the mouths to be fed are even here, multiplying faster than the stock, so the demand for a good article is always beyond the supply, hence the middle-men and butchers are reaping more than their share. To this, the producer will soon see to it that he gets his share, when meat raising becomes general.

Here let us remark, incidentally, that it is no uncommon fact that many of our largest planters are so fond of the old "ruts" that they are selling wheat at 85 cents per bushel and corn at 45, and buying their beef, pork, mutton and vegetables at high prices, all because they hooted at "small industries."

There has never been a more auspicious time to advocate the subject of this article. It strikes us Providence has sent this great abundance of the products of the earth, the past year, that we may learn, if we are wise, the great lesson in time of plenty, provide for the reverse. It is unreasonable to expect another such wonderful yield, but should these years of plenty continue, we can arm ourselves against the depressing effects of such super-abundance, by turning attention to these "small industries." Of course we do not expect every man to go at the same thing for in that case, it would, like the specialties, be more than the demand and be an expense rather than a profit. Let every one judge for himself which one is best, or it may be that all can be resorted to, according to the demands of his nearest market. Poultry-raising and bee-keeping will suit any situation, for New York or Boston are brought to our doors by rail-roads, as can be said of stock-raising and butter, &c. Milk can only be profitably sold by the farmer who lives near a manufacturing village, or within a few miles of a large town or city. We may in future have more to say on this subject, which to us, seems important and necessary at this time for serious reflection and consideration.

WE LEARN from the Hagerstown *Mail*, that Mr. Chas. W. Humrichouse, President of Washington Co. Agricultural Society is contemplating establishing a creamery, on his farm, "Springfield" near Williamsport, in connection with Mr. John Hoffman. There can be no doubt of the success of this enterprise. We urged our farmers again and again in this direction and we trust this move will be the means of establishing them in other counties of the State. We wish it success.

Invitation to Maryland.

We are frequently asked, what advantages Maryland possesses for farmers of small means? And whether Northern farmers accustomed to their methods of cultivation can find opportunities which will warrant them in removing to this state?

In answering this question of our friends, we shall doubtless answer numerous others, who are meditating a change, either in this direction or to the Western country.

Some very important items should be taken into consideration when we attempt an answer, viz: Can lands be had near good markets? Can they be obtained in small tracts? Can they be purchased at reasonable prices? What is the present condition of the lands? What are the advantages in the way of schools, churches, &c., in the neighborhood of these lands? Is the region generally healthful? The answer to these questions will doubtless cover the ground

Located as we are in Baltimore, we naturally look around us, and take this city as the market, and seek for land within a reasonable distance of this immediate locality. By railroad or steamboat a very large extent of country might be included in our survey; for in no part of the United States, are the facilities better in these respects than around Baltimore. But, setting these aside, we will only consider the country within a distance easily accessible by farmers with their own conveyances.

Lands can be had at very reasonable prices on all sides of us. Within five or six miles of the city are considerable tracts of heavily timbered land—mostly in oak—which can be had in parcels of from one acre to fifty, or more, at fifty dollars the acre. Of course, with no improvements; but surrounded by all the conveniences in the way of schools, churches, postoffices, stores and intelligent neighbors, which such a vicinity to our city would imply. We cannot call to mind any other location, within the same distance of such a large city, where like advantages can be secured as cheaply.

Passing from these to sections twelve or fifteen miles from the city we find very many tracts of land, which were once garden lands in productiveness; but which, from cropping, tobacco growing, or neglect, have either become sterile, or have beeen allowed to grow up in scrub oaks, beach, birch. chestnut, pine or sedge. These lands have generally some buildings, perhaps some fencing, mostly in need of repair. They are owned by non residents, which accounts for their condition. They are often situated in the neighborhood of villages, where all the conveniences can be had of any good country locality, and are generally within reach of excellent neighbors and an intelligent and enterprising community, These lands may be purchased in parcels varying from twenty to two hundred or more acres, and for the trifling sum of ten or fifteen dollars per acre.

The tracts which are sterile can be reclaimed by expending in artificial fertilizers, for the first season, what it costs with a prairie plow and eight yoke of oxen to break up the virgin soil of the West. Then by judicious management and turning in green crops, the fertility can soon be restored, as it was for generations during the past. The tracts grown up to oaks and chestnuts and pines can generally be made productive at even less cost than the others.

In addition to this should be taken into consideration that the risk to health bears no comparison to that incurred by those who remove to the West; for these lands are in high and healthy districts.

When we consider these facts, and the attractions of the climate, we have reason to wonder that so many who are contemplating removal from the cold regions of the North have overlooked so inviting a

locality as Maryland affords in the vicinity of Baltimore.

To those who have means, it is proper to add to the above, that finely improved farms, in buildings, fertility, and every possible agricultural advantage, can be purchased at remarkably low prices compared with Northern farms of the same character.

The New Orleans Exposition.

We have been pained to see in some of our exchanges a disposition to disparage this exposition, in consequence of the lack of pecuniary means to give it that full and successful "send off" which is most desirable. The pecuniary lack is, however, a small sum when compared with the extent of the Exposition, and the vast amount of good which it is destined to accomplish. It pleases us to know, also, that the people of New Orleans have come forward promptly to lessen, if not entirely to cancel, the indebtedness of the Exposition.

In our opinion it should be the part of the press all over the country to speak in encouraging words to those who have had this matter in charge, as also to the people of New Orleans who have done so nobly, and are still ready to contribute towards the good work.

The value of this Exposition, however, cannot be reckoned by dollars and cents. Its work and its value are to create a general good understanding and a better appreciation of each other in the people of all sections of our Union. The facilities of rapid communication and cheap transportation afforded by this Exposition will enable the active citizens of the East, the North and the West, to visit and become acquainted with the peculiar advantages of the South; and to discover some of the, as yet, but partially developed resources of that section of our country. The vast range of products which are represented at New Orleans will certainly open the eyes of many to the fact that as a nation we are blessed beyond compare in our soil and climate. The agricultural capacities of our Southern States have never been known in their extent and value to the Northern sections; and the generous hospitality of the the Southern character, towards visitors and settlers in their midst, is seldom appreciated except by those who have experienced it.

The Exposition in every respect commends itself to the people of our entire country as a means of mutual enlightenment, as to the disposition, the enterprise, the hearty fellowship and good will which exists everywhere throughout our borders; while in its foreign relations it is of immense promise for good. It is the first great enterprise of foreign productions in that section, and must inevitably prove to them what an inviting field is opened to the old world in the genial climate and the generous welcome which awaits them in that part of our country. The future influence of emmigration, and the new life given to our people all through the South by means of this emmigration, cannot be estimated at present. We should always remember, too, that whatever benefits one section especially, benefits to some extent all parts of our country. We hope many of our readers will visit New Orleans during this Exposition, taking advantage of the low rates of travel, to see and examine different portions of the South.

Most of all, let the press endeavor by word and act to hold up the hands of those who are carrying forward so nobly the great Exposition.

THE December issue of the MARYLAND FARMER completes the twenty first year of that most excellent agricultural monthly. During all these years there has been no change of name, no failure to make its welcome monthly appearance. The venerable EZRA WHITMAN, proprietor and editor-in-chief, deserves the grateful thanks of the farmers of Maryland for his liberal and able conduct of the FARMER in their interests. —*Southern Planter and Dixie Farmer.*

Agricultural Fairs.

THE KENT COUNTY AGRICULTURAL ASSOCIATION held its annual meeting for election of officers on last Monday, at which the following officers were elected—President, John Gale; Vice President, S. Vannort; secretary, W. P. Norris; corresponding secretary, W. T. Nicholson; treasurer, T. J. Willis; librarian, J. J. Roeder; auditing committee, J. W. Corey, J. M. J. Byron, Jos. Hossinger.

THE CECIL COUNTY AGRICULTURAL SOCIETY.—The stockholders of this Society elected the following directors for the eusuing year: Adam A. McGraw, Dr. C. M. Ellis, George Ricketts, Wm. Armstrong, H. H. Duyckinck, Col. I. D. Davis, A. W. Mitchell, John Gilpin, William S. Potter, Henry S. Condon, Aaron G. Suite, Clinton McCullough. Messrs. Condon, Ellis and Ricketts took the places vacated by Messrs. Warburton, Stump and Dannen. The old boord of directors, at a meeting held just prior to the stockholders' meeting, consummated the purchase of the fair grounds, consisting of upwards of twenty-six acres, for the sum of $5,807,57. The money received at the fair last fall aggregated $12,744; the total expenses amounted to $11,000, leaving a profit of $1,744 to the treasury.

HARFORD COUNTY AGRICULTURAL SOCIETY.—The election of directors of the Harford County Agricultural Society took place in Bel Air, on Monday, 5th inst.

The secretary read the statement of the treasurer, from which it appears that the receipts from all sources during last year, including a balance of $808,58 in the treasury, were $6,997,67, and the disbursements $6,463,10, leaving a surplus of $534,57 in the treasury.

The old board were unanimously re-elected. They are as follows: Allen Hoffman, Col. John C. Walsh, S. G. Davis, J. Frank Reasin, James M. Cain, Wm. M. Edelin, Wm. Baldwin, Geo. A. Cairnes, Andrew Boyle, C. C. Kinsey, Harry C. Lawder and P. Leslie Hopper.

AT the recent annual meeting of the BERKS COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY, James McGowan, Geiger's Mills, Pa., was elected president; Cyrus T. Fox, Reading, Pa., secretary; and William S. Ritter, Reading, Pa., treasurer.

AMERICAN AGRICULTURAL ASSOCIATION.—Fifth Annual National Agricultural Convention of this Association will be held at Exposition Grounds, New Orleans, February 20th, 21st and 22d, 1885.

All interested in Agriculture and kindred pursuits are invited to attend and participate in the proceedings. Addresses will be delivered and papers read by the leading thinkers and writers on Agriculture, Live Stock, Dairying, Ensilage and other practical subjects, and open discussion of each by the members.

The Conventions of this Association have been the most important gatherings in connection with agriculture held in America, and have been participated in by the leading men in public and private life. Three have been held in New York, and one in Chicago, and great and interesting as they were, this will doubtless surpass them all in attraction and value.

The Exposition itself will repay a visit to New Orleans. It is the most extensive and comprehensive of all others, and the Agricultural, Live Stock, and Dairy features exceed those of any other ever held.

The time selected for this Convention will be the most interesting period of the Exposition, as it will then be in its best stage, while at this particular time special exhibits of Dairy products, Live Stock and other branches of agriculture will be held.

Respectfully,

N. T. SPRAGUE, *President.*

JOS. H. REALL, *Secretary.*

For the Maryland Farmer.

Does Bee Keeping Pay.

In reply to this question, so often propounded, I wish to lay before your readers, a few facts that have come directly under my notice during the past few seasons. C. E. Canoles, of Hereford, Baltimore County, purchased the farm on which he resides, on time. At the end of three years the profits from the apiary had paid for the farm. Three years ago S. R. Heave, Hughesville, Md., started in the business, the first season the sales of honey and wax paid the entire expense. About $300 was realized the second year, and the apiary increased to thirty swarms. This year a crop of 3,000 pounds of comb honey was produced, of such a quality that it was readily sold early in the season, realizing nearly $600, and the thirty swarms all put in first-class order. Gen. Geo. Rosenberger, a distinguished stock breeder, of New Market, Va., purchased last spring of me, an Italian Queen of the Bellenzona type, and introduced it into a black or native swarm; after storing 108 pounds, it cast a swarm, and the swarm then stored 60 pounds, making a total of 168 pounds from one swarm, which readily sold at his door for 20 cents per pound, making a total of $33.60 and a swarm from one hive. I could fill columns of your valuable journal with similar and even larger reports of gains derived from these little pets, but dare not encroach too largely on your space, but permit me here to say, every farmer or farmer's family can keep bees, and that the attention they require is not half that bestowed upon the poultry, while the net returns are more than three times as great.

A Western exchange wisely remarks, thus, upon farmers keeping bees:

"Aside from the hopes of any pecuniary gain, there is a great inducement for the keeping of at least a few swarms of bees. In these times of adulterated sweets, about the only resort is to buy directly from your neighbor or produce your own. Honey is one of the most delicious sweets producable, and can be produced with as little expense and labor as anything, especially so in a small way. People who make a specialty of poultry raising, bee keeping, etc., give all the time possible which they think will pay one cent more. Yet honey may be produced as chickens are for home use, with but very little care. The perfectly straight combs sell at a better price, but do not effect the quality of the honey. A partially filled section will bring only half price in the market, but is just the same honey as fills the section without an empty cell, and with the knowledge of the present day, we are enabled to secure as much honey from two or three hives as our fathers did from four times the number."

Success in bee culture demands that close watchfulness, that all other branches of industry does. It was this close observation that gave to H. Mazlin, of Sandy Bottom, the past season, 397 pounds of section honey from the only hive he possessed. It gave to R. Wilkins, of Cal., 100,000 pounds from 1,000 swarms; to T. S. Miller, of Los Angelos, forty tons from 270 swarms, with an increase to 370 hives.

"As you care for your bees, so will your reward be,"—just the same as with your chickens, stock, etc.

Neglect them, and they will soon teach you a lesson.

"Two bee keepers living in the same neighborhood, both used the same hives and having the same facilities and advantages report as follows: A. took an average of 100 pounds of comb honey per swarm and doubled the number of his colonies. B. doubled his but did not get 10 pounds of honey per hive. The difference was the result of management, care and attention."

"C. H. L."

"Sunny Side," Balto., 1885.

Cheese and Butter Factories.

Within the last fifteen years few of the contrivances for rendering farming profitable in certain important sections of this country have received more attention and encouragement on the part of farmers than the establishments for the manufacture of of cheese and butter on an extensive scale. The origin of the business was in New York, where it has become quite large, and has been the principal cause for building up the dairying of that State to really remarkable proportions. We have repeatedly called the attention of our farmers to this subject, and we again urge them to engage in it more extensively, as our State is considered one of the best regions of the country for dairy farming.

Death of Gov. Coburn.

Abner Coburn, late Governor of the State of Maine, was a man of many sterling qualities, of large heart and of great practical good sense. Besides his natural abilities he was a man of strong, cultivated intellect, by his active life and of clear understanding. We observe that he has left mementos in his will to remind us of his qualities of mind and heart, which are worthy of his past good record. Among them is one of $50,000 to the Wayland Seminary, of Washington, D. C. And in addition to this, $200,000 to the Baptist Home Missions, for Freedman's Schools.

Another bequest shows his generous appreciation of our Agricultural Colleges, and his belief that they are destined to be of great benefit to our country. He gives and bequeaths to the Maine State Agricutural College, one hundred thousand dollars—the same to be funded and the income only expended annually. It is in striking contrast with many who belittle our agricultural aids, and fail to see how much of our country's prosperity will depend upon these in the future.

Death of Charles Downing.

Mr. Downing was 84 years old, and a distinguished landscape gardener and pomologist. He having inherited sufficient property for his support, lived the life of a retired gentlemen, devoting his time to the avocations in which he became distinguished. His brother, Andrew J. Downing, was the author of a number of standard works on landscape gardening, fruits, and country architecture. Since the death of Andrew J. Downing, who lost his life by the explosion of the boilers of the steamboat Henry Clay in 1852. Mr. Charles Downing has edited and supervised the publication of these books.

THE judge of the Great "English Dairy Fair," just held in London, have made a report of an exhaustive comparative test resulting in favor of the "DeLaval" on every point covered by a Cream Separator. They give it the highest recommendation for superiority in construction, operation and results, that any implement has ever received and their endorsement clinches the evidence of the great merits and advantages of this most useful of all dairy appliances.

They state that no butter maker can afford to be without one.

Sorghum or Early Amber Cane and Sugar Beet Seed.

The statistical agent for Maryland, Col. W. W. W. Bowie, received from the Agricultural Department, among other seeds for distribution, several small bags of Sorghum and Sugar Beet seed, which he has placed at the office of the *Maryland Farmer* for distribution to all who will agree to comply with the simple requirements of the Department, which is, a statement of the amount of crop and the chemical analysis of the Beets. If an analysis cannot be made, send a sample for analysis to the Department. It is desired to ascertain the quality of beets grown in each State for the production of sugar. This sugar question is now very properly exercising the public mind. If the improved variety of French Sugar Beet, now offered to our citizens, should even prove of but little profit for sugar, it will certainly be a valuable addition to the food of our domestic stock. Nothing adds more to the growth and fat of stock than sacharine matter.

HALF CALF AND HALF GREYHOUND.—Mr. Norris, a farmer living in Pleasant Township, Ky., is the possessor of a curiosity in the shape of a colt puppy—a beast half dog and half horse. The animal was foaled by a fine driving mare on August 3. The colt, or whatever it is, has been unable to stand since its birth, but is getting along finely. Its description is as follows: The head is that of a grey hound—long ears, nose, and small round neck devoid of mane The body is long and slender, covered with fine hair, as is the tail, which is long and slender. As there is no long hair on mane or tail, it has the appearance of a dog. The hoofs resemble a horse's hoofs. It laps milk and also suckles. Mr. Norris has been offered $250 for it, or $500 if he succeeds in getting it on its feet.—*Cincinnati Enquirer.*

Domestic Recipes.

FARMER'S RICE.—Take a quart of milk and put it on to boil in a pot of sufficient size. Mix two eggs thoroughly in a pint of flour, and when the milk has begun to boil, sprinkle this into the milk, and stir constantly. When well boiled, transfer to a deep dish and make it very sweet with brown sugar; grate some nutmeg over the surface.

A FARMER'S DAINTY DISH.—Peel and slice thin potatoes and onions, (five potatoes to one small onion,) take half a pound of sweet salt pork in thin slices to a pound of beef, mutton or veal, cut the meat in small pieces, take some nice bread dough and shorten a little, and line the bottom of the stew-pan with slices of pork, then a layer of meat, potatoes and onions, dust over a little pepper, and cover with a layer of crust; repeat this until the stew-pot is full. The size of the pot will depend on the number in family. Pour in sufficient water to cover, finish with crust. Let it simmer till meat, vegetables, etc., are done, but do not let it boil hard. Serve Hot. This we are assured by one who knows, is a dish fit to set before a king, or his peer —a farmer.

THE NICEST PIE EVER EATEN.—Peel some apples, and stew until soft and not much water left in them, then rub them through a colander; beat three eggs for each pie to be baked, and put in at the rate of one cup of butter and one of sugar for three pies; flavor with nutmeg. Bake as pumpkin pies, which they resemble.

PICKLED ARTICHOKES.—Boil your artichokes in strong salt and water for two or three minutes; lay on a hair seive to drain; when cold, lay in narrow-topped jars. Take as much white vinegar as will cover the artichokes and boil with it a blade or two of mace, some root ginger and a nutmeg grated fine. Pour it on hot, seal and put away for use.

HOW TO CEMENT BROKEN CHINA, ETC. —Stokes says: Beat the white of eggs well to a froth, let them settle; add soft, grated or sliced cheese and quick lime, beat them well together, and apply a little to the broken edges. This cement will endure both fire and water.

Sheep as Meat Producers.

Sheep as meat producers, have not attracted the attention from farmers that they deserve. When the price of wool was high, wool production was sure to command more attention than meat production, although it is doubtful if it was the more profitable. Now that the price of wool has fallen off, the advantages of mutton raising should receive greater attention. In no country, probably, is sheep raising made more profitable than in Great Britain, and there meat production receives the principal attention. The great aim in England is, and has been for a long time, to produce the largest and best sheep possible, and in so doing, the best wool has been produced. Large size, and early maturity is aimed at, and so high a degree of success has been attained, that the English breeds are the best mutton sheep in the world. The English feed well, care well for their sheep, and bring them to early maturity. This is what American farmers need to do.

More early lambs, and of larger size, should be produced, and good mutton should be obtainable at all seasons of the year. A large portion of the year, good mutton is about as much out of season as berries are. If a constant supply were provided, the consumption of this meat would be largely increased, and the demand also increased.—DR. REYNOLD'S *in N. E.. Farmer*

THE SOUTHERN CULTIVATOR AND DIXIE FARMER.—The January number is at hand, in Magazine form, a great improvement on the past. We commend this journal as in all respects adapted to the needs of our Southern farmers. Conducted with fine talent and taste, and always up to the times. Its various departments are full and interesting. Our Southern friends cannot do better than add it to their readings during these winter evenings. Subscription $1.50 Jas. P. Harrison & Co., Atlanta, Ga.

THE January number of the *Maryland Farmer* of Baltimore, is fully up to that periodical's high order of merit. The *Farmer* is progressive, yet conservative, even holding to that, and to that only, which is good, whether old or new, and so is wise as a counsellor and safe as a leader. Virginia farming comes in for its share of space, Ezra Whitman is the publisher. Price $1. in advance.—*Examiner, Nelson Co., Va.*

Keep Something Growing.

It has been found by the field experiments of Messrs. Lawes & Gilbert, of Rothamsted, that allowing lands to lie bare of vegetation during the growing season, is a practice that is wasteful of plant food, particularly of nitrogen in the form of nitrates. The analysis of drainage water coming from a soil that has no crop growing upon it, has shown an abundance of nitrates in solution, while that from another field receiving similar treatment, except that crops were sown, has shown no nitrogen in the drainage water, proving that the growing plant has been busy taking up the nitrogen and preventing it from going to waste by being washed away into the rivers and ocean. Experiments, having the same end in view, and giving similar results, have also been tried by others.

Fallowing land for a short time, for the purpose of destroying weeds and weed seeds, is doubtless an excellent practice under some circumstances, but the practice is too wasteful of nitrogen to be followed for any other purpose. Nature teaches us that the surface of the earth should be kept constantly covered by some form of vegetation. The practice of sowing winter rye in the fall, after the summer crops are removed, is therefore, on this ground, an economical one, even if it be ploughed in spring, though it is better to let it get large enough to feed to cattle either green or dry. —*New England Farmer.*

How Many Acres in this Field?

If one asks how many acres there are in any of our fields, nine out of ten of us, will say: "Oh, about—acres." This guesswork is one of the serious defects in our practice; we guess too much. Let us be more accurate and know each month just where we stand. We cannot tell just how much we have gained or lost by a crop, unless we know how much land it has occupied. If it has occupied "about" so much land, then we do not really know anything about it. To measure fields with straight sides and square corners is an easy matter; the length multiplied by the breadth will give the area. If there is a hollow running through the field, get its length by measuring along either side a certain distance from the central line, and multiplying this by the average width. No matter how many bends there may be in the central line, follow it; if the bends are equal both ways, you will have the exact length; if the central line follows a continuous curve in one direction, measure it, or else measure along both sides and take one half of their sum. When the area occupied by the hollow is thus determined, subtract it from the gross area of the field as previously ascertained.—J. M. STAHL *in American Agriculturist for Feb.*

Ammonia for Flowering Plants and Strawberry Plants.

A writer in the London *Gardner's Chronicle* says: Last year I was induced to try an experiment in chrysanthemum growing, and for this purpose purchased one pound of sulphate of ammonia, which I bottled and corked, as the ammonia evaporates very rapidly. I then selected four plants from my collection, putting them by themselves, gave them a teaspoonful of ammonia in a gallon of water twice a week. In a fortnight's time the result was most striking; for though I watered the others with liquid cow manure they looked lean when compared with the ammonia watered plants, whose leaves turned to a very dark green, which they carried to the edge of the pots until the flowers were cut. As a matter of course the flowers were splendid. The ammonia used is rather expensive, as I bought it from a chemist's shop; this year I intend getting agricultural ammonia, which is much cheaper. I have also tried it on strawberries, with the same satisfactory result, the crop being nearly double that of the others; it is very powerful and requires to be used with caution.

Farmers' Clubs.

F. D. Curtis, editor of the *Farmer and Dairyman*, has this sound and sensible talk:

"If the farmers in a single township or even a neighborhood, were thoroughly organized for the purpose, with but little expense to each, they could produce the finest blooded horses, the most showy and graceful cattle, the heaviest fleeced sheep or the purest bred hogs, and the gain would more than compensate for the effort. They would be enabled to command higher prices for farm stock, the cost of transportation would be lessened from the ability to market in bulk, the most costly agricultural imple-

ments could be procured, and the advantages of schools, churches and libraries be available to all. In other words, if capital can stud the ocean with thousands of sails, cross the mountains with lightning speed, and build up hundreds of mammoth enterprises, it teaches farmers that by following the same course they can do many things for themselves that would be impossible for the single individual to perform. United effort overcomes all difficulties and surmounts every obstacle, great or small."

That is simply concentrated truth. It is to be regretted that too often the farmers of a neighborhood seem to try to get as far away from one another as they possibly can. If they could only cultivate a feeling of trust, and understand how much they have in common, they could accomplish many things that now seem well nigh impossible. The farmers of a neighborhood could, by clubbing together, easily procure a thoroughbred bull. Their combined herds would give him service enough, and at a trifling cost they could make an improvement that would not be possible should they attempt it alone.

Publications Received.

"Poultry for Pleasure and Poultry for Profit:" Is the title of a neatly printed and illustrated little book of fifty pages, lately published by G. M. T. Johnson, of Binghampton, N. Y., price 25 cents, to be had at the office of the Maryland Farmer. It is just what has been wanted—much information in a small compass. Every poultry keeper should possess a copy of this most admirable little treatise.

"How to be your own Lawyer." An excellent adviser in all ordinary legal affairs. An advocate always on hand on common transactions in the business of life. One of its chief features is its tables of interest. measuring hay, grain, lumber, etc; agricultural tables as to quantity of seeds per acre to be sown; legal weight in the several States of a bushel of various products, seeds, etc. Price $1.50. M. T. Richardson, Publisher, 7 Warren Street, New York.

We have received from the Sun Mutual Aid Society of Baltimore, a small book on the "Co-Operative Assurance Movement," which is the first work of the kind ever published. It is quite an interesting publication, and giving a large number of legal decisions upon subjects connected with such organizations, a copy will be sent free, upon addressing them.

"How to tell the Age of a Horse," published by M. T. Richardson, New York, a very useful little book with pictures showing the teeth of the horse at the different ages. Price 25 cents.

"Incubators and Brooders," by P. H Jacobs, of Chicago, Ill.

"Kansas."—We have received from Mr. C. B. Schmidt, Commissioner of Immigration, Topeka, Kansas, a copy of a little pamphlet published by him, which presents in very ingenious and striking form the facts about Kansas as an agricultural and stock-growing State. The information given is up to date. Mr. Schmidt informs us that he will mail this pamphlet free to any address

"The American Forestry Congress" has issued a bi-monthly Bulletin, a neat 24 page pamphlet, containing a full account of the annual meeting of the Association, and other forestry matters. We welcome this forestry paper. It is only by educating the people to understand its importance and its requisites—not by legislation—a reform in our use of forests and forestlands can be hoped for.

From Brustlein, Sury & Co., 11 Dey Street, New York, a valuable illustrated pamphlet containing description of the different insects which prey upon fruit and other trees, also remedies for the removal of same. A copy will be sent free upon application to them.

From T. C. Evans, of Boston, Mass., advertising Hand Book. Its arrangement and general "get up" commend it to the public. Its motto is "Systematic and Persistent Advertising, the sure road to success in Business." This is the 14th edition.

The January number of a new journal devoted to the Dairy, Live Stock and the farm, under the title of "Agriculture," just received. It will aim to be a worthy successor to the *American Review and Journal of the American Agricultural Association*, whose subscription list and advertising patronage it has acquired. It will be published under the same management as the *Review*, but in different form and more practical in its contents. Terms $1.00 per year. A good chance for advertisers. Address "Agriculture," 32 Park Row, New York.

"Results of the Field and other Experiments conducted on the Farm and in the Laboratory of Slr John Bennet Lawes, Bart., L. L. D., F. R. S., at Rothamstead, England, on wheat, sugar beet, mangel wurtzel and potatoes. Also a statement of the present and previous cropping, etc , of the arable land not under experiment." This is an able and instructive document. We have perused it with great satisfaction, and were it not for its being so lengthy, we should be glad to publish it in the Maryland Farmer.

"The Sun Almanac," published by A. S. Abell & Co., as a suppliment to The Sun, is full of matter that is useful to the farmer, mechanic, merchant, &c., and should be in every private family.

From Hon. George B. Loring, U. S. Commissioner of Agriculture, (who by the way, has proved himself to be one of the best Commissioners ever holding that position,) "A report on the Organization and Mauagement of Seven Agricul tural Schools in Germany, Belgium and England," which is composed of exceedingly interesting matter. The agricultural schools and colleges of this country will find it useful and instructive.

A very pretty almanac received from Woolridge and Co., Baltimore, agents for Orchilla Guano.

"How to Propagate and Grow Fruit," by Charles A. Green, Editor of "Green's Fruit Grower." It contains 64 solid, condensed pages, full book size, over 50 illustrations and two beautiful lithographic colored plates. Over one hundred topics are discussed by those who are fitted by experience to advise. The author has had many years experience as a practical fruit grower.

From Landreth & Son, of Philadelphia, their "Rural Register and Almanac" for 1885– which is an exceedingly useful book for the farm and garden, containing a brief description of work to be performed in the garden each month of the year, and other useful matter.

We have received from Messrs. N. W. Ayer & Son, their calendar for the year 1885. It is gotten up in their usual style of doing business, and surpasses in size, beauty and convenience, any thing of the kind we have ever seen. It hangs in our office where it is much admired.

"The Decorator and Furnisher," published by the Decorator and Furnishing Co., of New York, is received. Subscription price $4.00 per year, or 35 cents per single copies. Agencies established in London and Paris, and is the only book of the kind published in this country.

An elegantly illustrated almanac, issued by the Baltimore American, Gen. Felix Agnus, publisher, who deserves much credit for presenting his readers with such an exquisitely embellished, and interesting work.

"A Review of the Commerce of the City of Baltimore, presenting the leading commercial and manufacturing industries. The relationship the city bears, as a distributive and productive market, to the various States and Territories of the United States, with a general review of her transportation interests," by John R. Bland, Secretary Merchants' and Manufacturers' Association, Baltimore, Md.

From the *Times Democrat*—New Orleans, La. Their almamac for 1885, which is filled with splendid engravings;chronological,statistical and useful matter, and far exceeds anything we have yet seen. On the cover is a lithographic plate of the World's Industrial and Cotton Exposition now in operation at New Orleans, also splendid Southern scenery.

Catalogues Received.

John Saul's Catalogue of plants for the spring of 1885, is excellent as usual and has a fine colored engraving Also from same, his spring Catalogue of new, rare and beautiful flower and garden seeds. 621 Seventh Street, Washington, D. C.

R. S. Cole's Catalogue of small fruits raised on his Fruit Farm, Hai man's Station, Md. We recommend this nursery to our home growers. Mr. C. is also extensively engaged in raising fine poultry, his principal breed being Plymouth Rocks, some of which can be seen at our office, and be had at reasonable prices.

From Peter Henderson & Co., their manual of everything for the garden, illustrated with fine wood cuts and lithographs, and each department containing everything deserving a place in the garden.

From Dillon Bros., Importers and Breeders of Norman Horses, Normal, McLean Co , Ill, their catalogue for 1885, giving a description of the Norman and Percheron Horses, also engravings from the pencil of the celebrated French artist, Rosa Bonheur and others.

From E. Whitman Sons & Co., Baltimore, a descriptive catalogue of Field and Garden Seeds,

Horticultural tools, &c Also table showing time of sowing the different seeds, and quantity usually sown on an acre, all of which is encased in a handsome cover, a copy will be sent free by writing them a postal.

From D. M. Ferry & Co., their Seed Annual, which is as usual up to the standard of that widely known firm, and will please accept thanks for package of seed received.

From W. Atlee Burpee & Co., of Philadelphia, their Farm Annual for 1885, containing as frontispiece an accurately colored lithographic plate of their new watermelon, "The Mammouth Ironclad," which have been grown to weigh from 50 to 72 lbs each.

From James M. Thorburn & Co , 15 John St., New York, their annual Catalogue of seeds for the vegetable and flower garden, the lawn, farm and nursery

OUR LETTER BOX.

Oil-Cake for Stock.

We give extracts from a letter from one who has been a subscriber from the first issue, B. T. G. of Virginia, on renewing his subscription, and will answer one of his inquiries to the best of our knowledge, hoping that others will give their experience upon the matter referred to.

"Much is said in the Agricultural Journals, about the use of oil cake, for cattle and sheep. As much as I have read upon the subject, I have never seen or used the article, and neither know its cost or the manner of using it, or in what form it is purchased. As I would like to try it, I will be glad if you will enlighten me upon the subject. Perhaps there are others of your subscribers as ignorant as I am.

The year 1884, has been a hard year upon the farmers of the Eastern Shore of Virginia. Large amounts were expended in fertilizers for the round potato crop, which proved an almost total failure. The whole crop sold did not pay for the fertilizers, having nothing to meet the expense of cultivation and marketing and to pay rent.

The sweet potato crop, though not quite so bad, yet was a greater failure, than I have ever before known in an experience of over thirty years as a farmer.

Labor is scarce, indifferent and high, and our farmers generally without money to meet the necessary advances for the incoming year. The consequence will be that but few round potatoes will be planted the next year, and sweet potatoes will be relied upon as the monied crop almost entirely. To make these the farmers rely almost entirely upon home made fertilizers, and but little upon artificial.

The corn crop for 1884 was variable, but on the whole was not over two-thirds or three-fourths of an average crop.

Wishing you and your associate a Prosperous New Year, I am very truly yours, B. T. G.
Dec. 30th 1884."

[We presume the above inquiry is in regard to cotton seed oil cake. It is used extensively in this country and in Europe, especially in England, for the purpose of increasing the flow of milk and for fattening purposes. The usual amount is from one to four pounds per day, mixed with dry feed such as bran, etc , or with cut and moistened hay or fodder. It should be given in small quantity at first and gradually increased in amount. Stock soon become very fond of it, and it answers all the purposes of the old-time flax-seed oil cake, and is much cheaper. It is to be had in this market at $30 per ton. Its use meets with, we believe, the universal approbation of dairymen and stockmen.—Eds. Md. Far.]

Bristol, Tenn., Jan., 1885.
Mr. Whitman,

I herewith enclose you P. O. order which is in full to January, 1886. I believe the Maryland Farmer is low at twice the price.

Yours very respectfully, J. W. O.

La Platte, Md., Jan. 15th, 1885.
Mr. Ezra Whitman,

I inclose amount for continuation of subscription to the Maryland Farmer.

I look forward to the beginning of each month for the "Farmer" as a visit from a dear and cherished friend, and always derive pleasure and instruction from the perusal of it. Wishing you a bright, prosperous and happy year, and many returns. I am with my kindest regards for yourself and the Colonel, Very truly, &c.,

J. G. C.

Charlestown, Md., Jan 12th, 1885.
Mr. Ezra Whitman,

Dear Sir:—Enclosed I send you subscription to the Maryland Farmer for one year. Wishing you a long life, of uninterupted happiness and pleasure, and that you may never know misfortune but by name, and sorrow be a stranger to your dwelling, is the sincere wish of the writer.

Yours with much respect,

J. N. B.

rich can no more be fed alone to cattle than a man can be fed wholly on honey or butter. The largest production of food by far —80 per cent. of it indeed, must consist of coarse fodder, as grass, hay or roots. And these are precisely those farm products of which the Southern farmers have a very meagre supply. So that a true embarrassment of riches is experienced by them. Their case seems to be one of that kind which is controlled by the frequently effective and irrepressible law of the division of labor; viz., they must grow the seed and others must turn it to account in making beef, butter, wool and mutton to sell to them. Thus the Northern farmers and the Southern cotton-planters become mutually dependent upon and necessary to each other, and perhaps this very matter of cotton seed and its economic disposal seems to show this social dependence in a stronger light than almost any other circumstance of the kind. But it is worth while to draw the attention of the Northern and Western farmers and dairymen to the enormous value of this waste product, now going a begging for some means of its profitable disposal. It seems that the manufacture of the cake is of more importance than that of the oil, and its market value pays the whole cost of its production with a reasonable profit, leaving the oil as an additional profit. The oil is valuable for many purposes, and can readily be disposed of, even for a fine lubricating or burning oil. If, then, a sufficient demand is made for the cake for the purpose of feeding cattle the business of crushing the seed will greatly increase, and the present wasted product is about 1,000,000 tons of the cake, and the whole value about $20,000,000, while the actual ultimate profit of the feeding would not be less than two or three times as much. But the question occurs, why should not the Southern planter utilize a large portion of this food product by growing fodder crops and roots for feeding, for both of which their soil and climate is exceedingly adapted? To do this would, it seems, solve the whole question. It can be done, doubtless, if the will to do it only exists or can be awakened.—*New York Times.*

Ensilage.

No Backsliders.—Maj. Henry Alvord made the statement at the Connecticut Meeting of the State Board of Agriculture, that of all the men of his personal acquaintance in New England, New York, and some of the other States further south, who had built silos, and intelligently managed them, he could not name one who had lost faith in them or discontinued their use.—*N. E. Farmer.*

[Our experience corresponds with Maj. Alvord's and being among the first to recommend the system, we are gratified at its great success and value to the agriculturist.—Eds.]

Last year a Connecticut farmer improvised a small silo by sinking a molasses hogshead into the ground in his barn cellar. He cut up all his corn fodder with a hay cutter, supposing he had enough to fill about four hogsheads but on packing it found it wouldn't fill one. He then bought of a neighbor as much more as one horse could draw and still there was room. He then cut up the stalks from a piece of sweet corn, and with a lot of rowen managed to fill his hogshead. He made a close fitting cover, and with a jackscrew set under one of the floor timbers pressed it down as tightly as possible. In the middle of December he opened his silo and found the corn as sweet and fragrant as when put in. From the hogshead he fed one cow half a bushel of ensilage morning and night for two months, and considers it the best milk producing food that can be fed. If a silo on so simple a plan is practicable, there is certainly no reason why everybody should not have one, and satisfy himself on the value of the ensilage system.—*Mirror and Farmer.*

This is my third year's experience with ensilage, and the longer I try it the better I like it. My experiments are on a small scale, and I am satisfied that no farmer is too poor to have a silo. Mine is in a corner of my barn, and is boarded with matched boards, single thickness, at a cost of not over ten dollars, and I think it answers just as good a purpose as though it cost one hundred dollars. This year I had about two and one-half tons of corn fodder which

I cut and hauled to the barn, put in my silo and covered and weighted the same day, using about half a ton of stone per square yard. I opened my silo in about five weeks and I found the ensilage to be perfect. I feed without weighing; but as near as I can judge it takes two and one-half tons of ensilage to equal one ton of good hay.—*Mirror and Farmer.*

D. J. MANCHESTER.

North East Harbor Me.

This is my third year of experience with ensilage. I am much pleased with it. The first year I cut it; last year I put it in without cutting; it came out all right. It cost $5.50 per acre to cut it and only $2.50 without cutting. I plant pretty thick and the stalks do not grow so large. I consider it worth more. I weight with muck. It keeps the air out better.—*Mirror and Farmer.* G. R. DREW.

North Danville, Vt.

Weights Per Bushel for Maryland.

For the convenience of farmers and others who have not the information always accessible, we give the following table of weights to the bushel.

	Lbs.		*Lbs.*
Beans	60	Corn Meal	48
Barley	48	Turnips	50
Bran	20	Wheat	60
Buckwheat	48	Millet seed—	
Charcoal	22	German	50
Clover Seed—		Hungarian	48
Red	60	Oats	32
Sapling	60	Onions	56
Corn—		Peas	60
Shelled	56	Potatoes—	
Shucked	70	Irish	60
Flax seed	56	(2½ bush. to the bbl.)	
Grass seed—		Sweet	56
Blue	14	(2½ bush. to the bbl)	
Orchard	14	Rye	56
Red top	10	Timothy seed	45
Land plaster	100		

A FLORAL WONDER.

Mons. Guillott the famous French rose grower has astonished the floral world by producing from seed a perfectly free blooming *yellow* Rose. Although only a few plants of this rose were sold in France in November last Messrs. D. R. Woods & Co., the well-known rose growers and florists of New Brighton, Pa., again exhibited their usual enterprise in importing this and other fine new sorts. As they are probably the only firm in the United States who will have this rose for sale this season, you can obtain a complete description of it only from their catalogue which will be forwarded to any of our readers. Send stamp for one.

Make Every Acre Count.

An English dairy farm, that recently took a prize for good management in a competitive trial, had an expense account of $48 per acre, while the receipts were between $60 and $65 per acre. The rent was $10 per acre, and the labor account $8 75, manures and food purchased $14 25 per acre. Sixty acres were under the plough, and the ballance of 127 acres was in grass. This will yield the farmer from $2000 to $3000 in round numbers for his salary as manager. Now these profits are not specially large per acre. Many farmers would consider $12 to $17 a small net income from an acre of corn, potatoes or grass. The secret of success in the case of the English tenant farmer who pays $10 per acre rent for his farm is, that he makes *every acre pay a profit.* Americans as a rule carry too many unprofitable acres as a dead weight, a weight that draws so heavily from the income of the few productive acres, that the average profit per acre for the whole farm is lamentably small. An idle acre of land is as unprofitable as an idle workman or an idle machine. Let us have no unprofitable servants.

FARMERS' FOLLY.

Some farmers adhere, even against the full light of fact and discovery, to the old fashioned folly of coloring butter with carrots, annatto, and inferior substances, notwithstanding the splendid record made by the improved butter color, prepared by Wells, Richardson & Co., Burlington, Vt. At scores of the *best* Agricultural Fairs it has received the highest award over all competitors.

White and Yellow Corn.

We are asked to give the economical difference between white and yellow corn in feeding value. In the eastern states yellow corn is preferred, supposing, as feeders generally do, that the yellow is more fattening than the white, that is, that it contains more oil. Chemical analyses have shown the yellow to contain from one-half to one and a quarter per cent. more oil than the white, but the white often contains about one per cent. more albuminoids or muscle-forming matter. The value, when figured up, is slightly in favor of the yellow—not more than five cents per hundred pounds in any case that we have seen. To feed growing animals the white is as valuable as the yellow, but for rapid fattening the yellow is prefered.

As house meal, many prefer the white, and in some markets it sells the highest. When used for feeding street railroad or omnibus horses, in cities, the white is quite as valuable, as it usually contains a little more muscle-sustaining food. But, in this case, it is ground with an equal weight of oats. As pig food the yellow is generally preferred, and brings a few cents more per bushel.—*National Live Stock Journal.*

Experience with Lucern.

I have had much experience in growing it on the Parana River in South America, and in this country. The soil and climate were different in the two places. In the first-named, the soil was close and compact, and the climate hot and dry; while here the lands are light, sandy loam, suited to all crops, especially to early vegetables and fruit that require an aerated soil, with rains and temperature usual in this latitude, but softened and tempered by the salt air of the Atlantic Ocean on one side, and the Chesapeake Bay on the other.

Under the different circumstances, the crop has always been a success, and I see no reason why it should be a failure in any section that will produce grass or clover. In South America I have had eleven crops in one year, and five in this country; these are the extremes; I think it will average four crops a year here.

It is by long odds the best crop for a great amount of good feed from a small area of land. The best results are to be reached only in rich, clean land, with not less than twenty pounds of seed to the acre, sown broadcast; after each crop, give it a top-dressing of ashes, bone, fish manure, or a good complete phosphate; the roots go at least six feet into the ground.

All animals are fond of it. It must not be grazed, but cut close to the ground, to prevent the formation of tussocks.

This part of the state, one of the original eight shires of Virginia, so long cut off and out of sight of the world, has recently been opened up by the completion of a railroad which brings us within a few hours of all the northern markets. Trips that formerly occupied a week are now accomplished in a day.—*Country Gentleman.*

Accomack County, Va. O. A. B.

MESS. SMITHS AND POWELL, of Syracuse, N. Y., writes that on December 24th their, famous cow, Aaggie (901), presented them with a very fine heifer-calf, large, handsomely-marked and vigorous.

It was sired by Netherland Prince (716), now, with Neptune (711), at the head of their herd and conceded to be one of, if not the finest Holstein bull in this country.

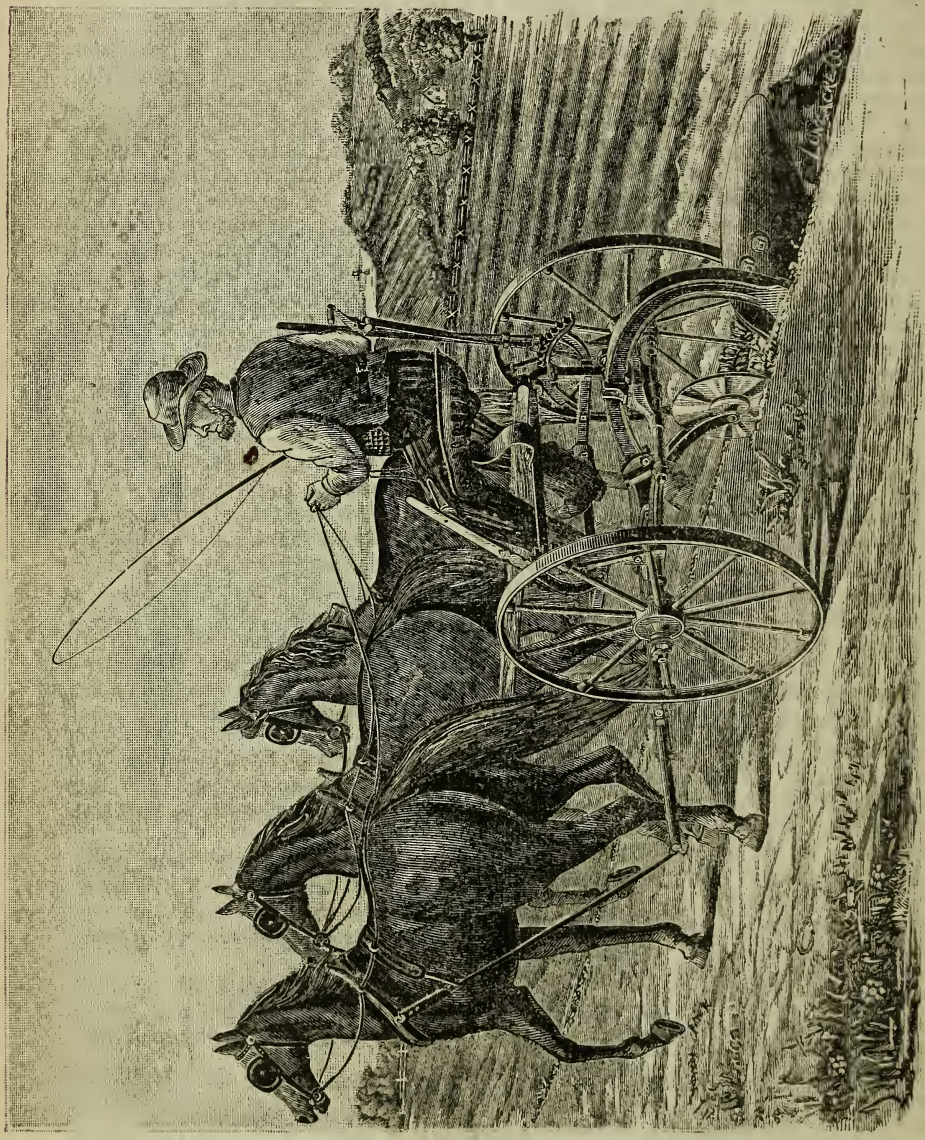
The day previous, Lady Netherland (1263), the dam of Netherland Prince (716), Netherland Queen (414), and Netherland Princess (862), gave them a splendid heifer-calf, sired by Neptune (711), son of Aaggie.

It will be seen at a glance that these two calves are wonderfully-bred for milk and their development will be watched with much interest.

Neptune and Netherland Prince stand, respectively, at the head of the deepest-milking and the finest and most symmetrical families of Holsteins that are now offered to the public.

An examination of this herd, of which many of the cows and heifers are bred to the two bulls mentioned, will repay anyone.

FARMING MADE EASY.



FARQUHAR EUREKA SULKY PLOW.

For many years we have watched with great interest the advancement of the Sulky Plow, and we are satisfied it is folly to trudge behind a walking plow, when the same work can be done better, cheaper, quicker and with greater ease by a Sulky Plow. The above cut represents the "FARQUHAR EUREKA SULKY PLOW," which is constructed upon mechanical principles. It is a saving of much labor, and like the reaper and mower will go into general use.

Live Stock Register.

For the Maryland Farmer.

How to Raise Calves.

Experience and observation have invariably shown me that it is for the greatest good of both cow and calf that they be separated when the latter is a couple of days old, and that the calf be allowed thereafter to suck the cow, if at all, only in the morning and at night. Allowing the calf to run with the cow spoils her as a milker, for the calf will suck at irregular intervals and will rarely draw the udder dry, the result being to decrease the flow of milk and to shorten the period of its continuance. The cow's teats become sore and she refuses to allow the calf to suck, and the result is either to dry her up completely, or else to produce garget. Nor does the calf do well. It depends too much upon the milk and learns to eat other food slowly; and as a consequence it first becomes fat-bellied and then runty. Either the calf should be separated from the cow altogether, or else admitted to her only twice per day. When the latter plan is adopted the udder should be drawn dry after the calf has completed each meal and the teats wiped clean, and if they show a disposition to chap, a little linseed oil be applied. When this is done all injury to the cow is avoided. This plan is also much better for the calf. During the day, not having its mother to go to when it feels a little hungry, it will be disposed to eat other food and can soon be taught to eat grass and grain. The only objection to this method is that the calf is likely to suck the cow and she to allow it to do so after they have been totally separated for some months; but as muzzles are cheap and easily made, this objection has not much weight.

The plan which I have generally adopted, however, is to separate the calf from the cow when a week old and to teach it to drink. When this is done the calf should be allowed to suck the cow till it is a week old, for to teach a calf of a less age to drink is very troublesome, as I have found to my sorrow. The first attempt to teach the calf to drink is best made in the evening, when it is hungry, and when it is waiting for its usual evening meal. A gallon of milk is drawn in a bucket and at once taken to the calf, which has been previously tied. This is done by buckling a strap around its neck, and tying a rope or strap four or five feet long into this. When the calf's nose is placed in the milk it will in a majority of cases begin to drink at once. Should it not do this, get some person to hold its nose in the milk and placing your hand under its nose, insert a finger in its mouth. It will begin to suck your finger and in doing so will suck up the milk. In a few moments the finger can be withdrawn and the calf will continue to drink. As soon as it has drank all the milk in the bucket, draw more for it, being careful never to draw so much at one time that it will become cold before the calf has drunk it. As the calf grows older, skim milk and a slight proportion of oil meal can be made to take the place of the new milk, this change being made gradually. To feed a calf in this way requires that you do all the milking, but the better results fully justify the increased labor.

It is highly important that the calf be taught to eat other food and be made independent of milk for support at as early an age as possible. A little oil meal can be put in the milk as soon as the calf is ten days old. The quantity at first should not exceed a teaspoonful but can be increased to a tablespoonful in the course of a couple of weeks. As soon as the calf is two weeks old a box containing a little wheat bran and corn meal seasoned with salt should be put within its reach and twice each day it should be given a small bunch of soft hay. It will soon learn to nibble at these and to get the greater part of its living from them. In time whole oats can be substituted for the corn meal, and later whole corn can be added. Corn alone is not a proper food food for a calf or for any growing animal. It is a food well adapted to the production of fat, but it is deficient in the muscle and bone forming elements. Calves fed on corn may be fat but at the end of two years they will be neither so large nor so profitable as those given other grain the first year. For growing animals, calves included, there is no better grain than oats, as it is a splendid muscle former. Bran is another good growing food, but as now turned out from many mills it contains but little nutriment. Calves fed on oats and bran, and clover hay or corn fodder, will make a fast growth and can not well be more profitably fed. I have heard a few cattle raisers recommend

corn alone for calves, but in this they were certainly mistaken; it should be fed only in connection with oats and bran.

It is generally better to have calves dropped in the early spring as then they are ready for pasture till it is ready for them. There is no better or cheaper food for calves than good pasture, and it is most profitable to have them spend the first six months of their lives upon grass. But they must also be given grain, and they will appreciate a bunch of hay, be their pasture ever so good. JOHN M. STAHL,
St. Louis, Mo.

For the Maryland Farmer.

About Stock Feeding.

A pre-requisite for succes swith stock is a love for it. This appears in the experience of almost every stockman. The horse or the cow which is a favorite with its keeper, is the one pretty sure to do the best. He who enjoys being around among the stock, and is on the watch to provide for, and even anticipate, their wants, is the man who will succeed better than his neighbor who has better facilities, yet lacks the love for his animals.

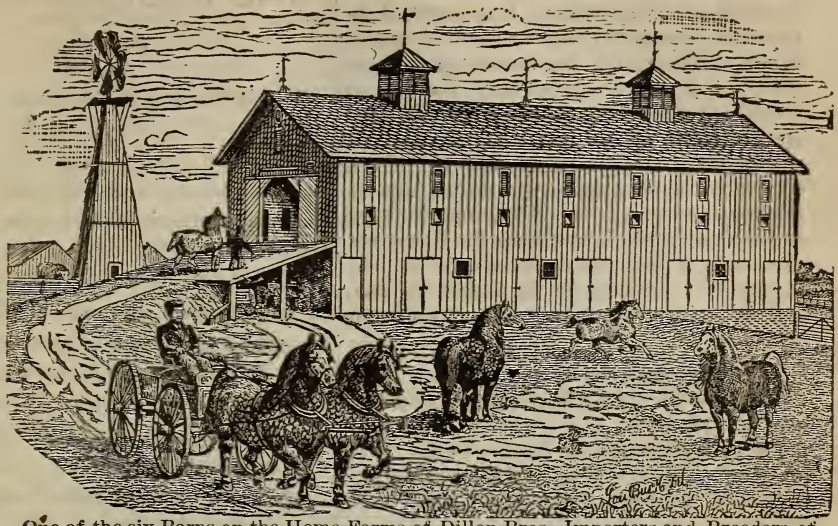
It is for this reason that the owner should personally supervise the winter care of his stock, unless, perhaps, he may have a hired man who has as great an interest in it as the "boss" himself. But such men are rare. A man who does not care much about stock anyway, is more than likely to simply go through the process of feeding, because he is obliged to, and never looks after details as he should. In the matter of treatment of stock, such a man is harsh, rude, and often cruel. The writer has one now in mind who used to work on the "old home farm." To hear a word spoken to the plow team in any but a harsh tone of voice, was the exception, and because he had a particular spite against one of the horses, he had a way of pelting it with stones as large as his fist, which tore off the hair, here and there, on the faithful animal's shoulders and back, or he would deliberately unhook a trace and beat the horse over the head with it. Fortunately, he dare not touch the other one in such manner, for he knew the consequences would be that he would have to follow the plow handles pretty lively for the next half day. The sooner such a man and such a team part company the better.

Wasteful feeding, then, may be sure to follow the hiring of an indifferent and careless man. But there is one danger to be spoken of in connection with the man who is over-ambitioned to take good care of stock. He will over-feed, and produce growth, and better general appearance. He will stuff a particular animal beyond reason, simply because he likes it, for one trait or another. It will not be long before the animal is "off feed" and will waste more than it eats. This is carrying kindness to an extreme. A single wrong feed may be the beginning of disease and death. We cannot be too careful in the matter of derangement of the digestive system for on this the health of the stock primarily depends.

J. W. D.

Chewing the Cud.

There is no such thing as a "cud" which the animal keeps in its mouth all the time: but there is a cud in another sense. Animals like the cow, which live upon food not very concentrated, have to consume large quantities of it to get the necessary quantity of nutritive matter. Hence, they do not chew their food fully while grazing, but swallow it as soon as they can and proceed to get more. Afterward, when resting, they bring back portions of the food to the mouth, by a special arrangement of the muscles of the stomach, and chew it over again; this time the mastication is thorough. This second process is called chewing the "cud." After one portion is sufficiently masticated it is swallowed and passes into a separate stomach; another portion of the rough food is then chewed, and thus the process is continued until all is masticated. Now, when a cow gets sick the desire for food ceases more or less, and the animal ceases to bring up and chew its cud, just as it ceases to graze when sick. Not chewing the cud, then, is a symptom of sickness. It may be of various kinds, and the resumption of cud chewing is a symptom of returning appetite and therefore of returning health.—*Mirror and Farmer.*



One of the six Barns on the Home Farms of Dillon Bros., Importers and Breeders of Norman Horses, Normal, Ill.

The Norman Horse.

Wherever the Norman Horse is found in America, the name of Dillon is known. The Dillons were pioneers in this line, and, as will be seen by the facts given below they still continue to do pioneer work. Having demonstrated beyond a question that the Norman Horse crossed with the common produces the ideal draft horse for farm and draft purposes in the North, and after having demonstrated to their own satisfaction that it would be equally valuable in the South, they have engaged in an enterprise in Texas which is simply magnificent.

These gentlemen in connection with others purchased a tract of land in Shackleford Co., Texas, embracing 2,700 acres, and in addition to this are entitled to 75,000 acres besides, giving them a range of over 100,000 acres, 2,700 acres of this is under fence. On this range they have placed 4,400 horses, principally native mares, these they are breeding to Norman Stallions as fast as they can spare the stallions from their home stables.

The objection that some horsemen have urged against the Norman Horse is that they would not endure the southern climate. The Dillons have proved that this is not true. They have demonstrated that the Norman will stand both summer and winter fully as well as native stock, and that colts will thrive full as well as at the North.

This firm guarantee all horses bought of them to be just as represented. Their beautiful illustrated catalogue of Norman Horses, giving list of animals imported and bred in 1884, amount of stock on hand, and much useful information concerning the Norman Horse sent free of charge.

Live Stock Premiums.

The premium lists and rules of the live stock divisions of the Department of Agriculture of the World's Industrial Exposition make a handsome pamphlet of over sixty pages, so numerous are the premiums offered. The fund appropriated for this purpose amounts to over $42,000, which have been distributed by Mr. Geo. Johnson, Superintendent of the Department of Agriculture as follows: Horses $12,000, breeding and dairy cattle $12,000, fat stock (cattle, sheep and hogs) $10,000, sheep $5,500, hogs $5,500, poultry $5,000, and dogs $5,000. The dates fixed for the exhibition of the several breeds of live stock begins with the horses, Dec. 20th, continuing until March.

There are premiums for every variety and breed of stock, for short-horns, Herefords, Aberdeen-Angus, Galloways, Holstein and Devons; for the best dressed carcasses; for the best car-load of cattle; on swine, for the Berkshires, Poland-Chinas, Devon-Jerseys, Chester Whites, Essexs,

Yorkshires and Suffolks; in sheep, for Southdowns, Cotswolds, Leicesters, Lincolns and Merinos; in horses for thoroughbreds, Clydesdales, Percherons and Normans, and so on throughout the list of stock, a prize being offered for the best specimen in each variety.

The total amount in premiums, prizes, etc., and similar purposes, appropriated by the management in encouraging. making provisions for and promoting the live stock display is over $125,000, a sum unequalled at any prior exposition or industrial fair, and will naturally make it a magnificent success.

Maryland Cattle for Texas.

The Easton (Md.) Star states that a carload of 48 cattle was shipped from that place a few days ago for Bexar, Texas. "It consists" adds the Star, "of a lot of young bulls and heifers, of the breed known as the Herefords, all uniformly marked with white faces, and the other distinctive marks of that breed. They had been purchased a few months ago by Mr. G. A. Horie, one of the partners in the extensive breeding ranch known as the Albert Fink Company, and located near San Antonio, Texas. They are taken there to cross upon the native breeds. Experience has taught these gentlemen that this particular breed of cattle is best adapted to the production of a vigorous and hardy race of animals which can measurably take care of themselves, not requiring such tender care as some other breeds, which have also been tried. This shipment of cattle was bred by Col. Edward Lloyd and Dr. Charles H. Tilghman, of this county, and Dr. Wm. H. Decourcy, of Queen Anne's. The above named gentlemen, with Gen. Hardcastle, of this county, have made several visits to the Western States and to Canada, where they have purchased the best specimens of this breed of cattle that could be obtained, some directly imported from noted English herds."

THE POULTRY-HOUSE.

Poultry.

We invite especial attention to this department of our magazine for the present year. The general improvement in this direction throughout our country requires that our farmers should give this subject renewed thoughts. It is destined to be a great industry in the near future. We ask correspondence, and will cheerfully publish all useful experiences of breeders and keepers. In our "Chapters on Chickens" will be given the experience of one who has met with decided success in this field, and who will give his personal methods. He gives these in short paragraphs to make his meaning the clearer; that others may have the same success.

For the Maryland Farmer.

Chapters on Chickens.

BY EXPERIENCE.

CHAPTER II.

PROFITS.

1. We have many inquiries as to the profits of the chicken business. The inquirers wish something upon which they may rely, as coming from one who has tried it, we give it in this chapter.

2. With ordinary care, on a farm, no stock will pay as large a percentage on the outlay as poultry.

3. In the summer the old stock on the farm need only one feed a day:—a good feed in the morning.

4. In the winter they must have good shelter and good attention to secure health and profit; but not more than you would naturally give to your cattle, sheep or pigs.

5. The produce will bring more dollars if fed to poultry than it will if fed to any other live stock.

6. The returns come in more quickly and more regularly than if fed to any other live stock.

7. All experiments go to show that the profit reaches all the way from 100 to 300 per cent. on the investment.